Diversity Initiatives in Higher Education:
A Case Study from the University System of Georgia

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ABSTRACT

This study examined the responses of 1,546 senior survey participants on the National Survey of Student Engagement (NSSE) during the years 2005-2008 to analyze the influence of sex, race, and cohort as independent variables on student engagement in diversity activities at Valdosta State University. Using a Multivariate Analysis Of Variance (MANOVA) and a follow-up Analysis Of Variance (ANOVA), this study examined the NSSE responses of students enrolled as full-time seniors during the spring semester of each year for the years 2005-2008 on 11 diversity engagement variables selected as dependent variables.

Results of the analyses revealed that there was no statistically significant influence by sex and by cohort, by sex and race, or by sex, race, and cohort. Of the three variables analyzed, only the variable of race was found to have an influence on 5 of the 11 dependent variables selected to represent diversity interactions. The analyses for the present research indicated that colleges should focus the largest number of activities for diversity interaction among its student population on the topic of race and incorporate activities to support discussion of other dimensions as secondary factors. Future researchers are encouraged to expand the study to include multiple institutions and to examine the influence of individual racial and ethnic categories on diversity interactions. Researchers are also encouraged to investigate the manner in which race influences the interaction and development of student participants.

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DEDICATION

This dissertation is dedicated to my late father, Mr. Samuel Victor Viverette, who has in his own quiet, succinct way encouraged me to reach for the stars and taught me that perseverance always pays off. His quietly and pithily worded encouragement to, “lay with it,” which meant, “never give up” will always ring in my ears.

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Chapter I

INTRODUCTION

Background

As the United States initiated the second phase of its civil rights movement, the focus of its implementation shifted from the legislated mandates of civil rights law to a more inclusive model of acceptance and appreciation referred to as multiculturalism or cultural diversity (White, 1994). The laws supporting civil rights mandates were crafted in 1963 and included Title VII of the Civil Rights Act of 1964, which prohibits employment discrimination based upon race, color, religion, sex, and national origin; the Equal Pay Act of 1963, which protects men and women who perform substantially equal work in the same establishment from gender-based wage discrimination; the Age Discrimination in Employment Act of 1967, which protects employees over 40 years of age or older; and Title IV, as well as the more recent addition of the Americans with Disabilities Act of 1990, which prohibits discrimination of individuals with disabilities (United States Equal Employment Opportunity Commission, 2008). Although the civil rights mandates remain active, and employers and educational institutions adhere to them, the prevailing negative sentiment of the public and the stigma attached to the affirmative action concept regarding its predominant focus on race and gender has caused a shift to the more inclusive concept of cultural diversity (Allen-Meares, 2007). Cultural diversity expanded the concept of difference to include any dimension in which an individual may experience difference from the prevailing norm (Howard-Hamilton, Phelps, & Torres, 1998). Exclusion from the prevailing norm can result in repression and

denial of opportunity. Many examples of repression and/or denial of groups to employment, and/or education, based on exclusion from the norm or difference in race, gender, and national origin exist throughout history.

Civil rights mandates seek to redress past practices of repression and denial of opportunity. In contrast, cultural diversity sought to reduce misunderstanding and increase effective communication by identifying commonalities among differing groups (Howard-Hamilton et al., 1998). Individuals educated to recognize differences inherent in diverse populations are trained to understand that communication, perception, and current behavior are impacted by the vicissitudes in an individual's prior experiences or personal filters. A multitude of different filters within one organization can have a significant impact on its success. As individuals of differing cultures interact and attempt to work together, lack of appreciation for differing perspectives often result in workplace conflict. Workplace conflict can escalate to complaints, high turnover rates, and other problems that could inhibit productivity.

Employers recognized that cultural diversity, or rather the management of it, greatly impacted employee productivity, job satisfaction, employee turnover rates, recruitment goals, corporate image, adherence to the mission, and sales (DeLeon, 1995). In the private sector, businesses and corporations have initiated organizational diversity initiatives which have included the creation of high level positions with such titles as Vice President for Diversity and Chief Diversity Officer, dedicated to the encouragement and management of increased sensitivity to diversity among its employees, customer base, and clients as well as the creation of committees composed of diverse employees to provide ongoing input into company efforts (DeLeon, 1995; Howard-Hamilton et al.,

1998). Postsecondary institutions have begun to recognize the importance of managing the diversity of its student population and faculty to continue to provide access to higher education to U.S. citizens and to instill cultural sensitivity in their graduates (Campbell, 2000).

Statement of the Problem

In many instances, racially and ethnically diverse students reported feeling isolated from their White peers (Noone, 2008). Cultural differences may increase the feeling of isolation experienced by students who exhibit characteristics that differ from the prevailing norm. Characteristics such as different modes of communication, lack of assertiveness, difficulty with language, and prevailing customs may serve as contributors to this sense of isolation. Students reported mitigating the effects of such barriers by connecting with other diverse students and participating in classrooms with faculty who were patient and encouraging (Noone, 2008). This study sought to establish the effect of best practices on the retention of ethnically and racially diverse students in colleges and universities.

Purpose of the Study

The changing demographics of the American population created a cascade of changes throughout various societal systems in the country (U.S. Census Bureau, 2000). The evidence of such population changes can be seen in both secondary and postsecondary educational institutions as well as in the American workforce. As the American population continues to experience shifts in its racial, gender, and age composition, these shifts will be subsequently reflected in the secondary and postsecondary school systems as well as in the workforce. As workforce changes become

evident, employers will increasingly seek to identify strategies to increase employee productivity and reduce interpersonal workplace conflict (DeLeon, 1995). Management of the cultural diversity component of the nation's workforce will require employees who are culturally aware of, and sensitive to, the needs of their co-workers. Postsecondary institutions will be seen as the mechanism to produce these employees (DeLeon, 1995).

The purpose of this study was to identify and compare the year-to-year educational gains between cohorts of postsecondary seniors in the area of engagement in diversity interactions as identified by student responses on the National Survey of Student Engagement (NSSE) through a secondary analysis of a large-scale data set. The analysis results were then linked to institutional initiatives implemented to support student development. Data collected by the NSSE served as the focus of the proposed study. The NSSE is a comprehensive assessment involving hundreds of higher education institutions throughout the United States that has successfully shown the relationship between student participation in educational best practices and student outcomes (National Survey of Student Engagement, 2009). Gurin et al. (2002) and Engberg (2007) have established an empirical link between cultural interactions and positive learning outcomes among student populations of many institutions. The empirical results of the NSSE study, combined with the work of Gurin et al. and Engberg, provided a foundation upon which to extend research in this area and enable future researchers to examine specific variables within this area. This study sought to extend the work of the earlier researchers by examining the effect of student engagement in diversity interactions as an outcome.

Theoretical Framework

One of the desirable outcomes sought by postsecondary organizations is to meet

the needs of employers by producing graduates who are workforce ready in terms of being conceptually aware about cultural diversity and can successfully function in a diverse work environment (Diller & Moule, 2005). In order to produce graduates who possess knowledge of the concept of cultural diversity, many colleges adapted use of the student development theories identified by Pascarella and Terenzini (1991). One of the most widely known student development theories is Tinto's theory of student departure (Pascarella & Terenzini, 1991). Tinto theorized that students enter college with varying patterns of personal characteristics and skills, including dispositions and intentions. As a result of interactions between the student, the structures, and the members of the college community, the student's characteristics and skills are reformulated. According to Tinto, rewarding student encounters with the formal and informal components lead to greater interaction and greater student retention.

Reformulation of student dispositions includes exposing them to the dimensions of diversity. According to the model of cultural difference created by Gardenschwartz and Rowe (2006), the four major layers of diversity are organizational dimensions, external dimensions, internal dimensions, and personality. The organizational dimensions of diversity include: functional level or classification; work content or field; department or unit, seniority, work location, union affiliation, and management status. The external dimensions of diversity include: geographic location, income, personal habits, recreational habits, religion, educational background, work experience, appearance, parental status, and marital status. Internal dimensions of diversity are those that cannot be easily changed by the individual and include: age, gender, sexual orientation, physical ability, ethnicity, and race. In identifying the dimensions of diversity, the opportunities

for experiencing the concept difference are frequently situational and, as a result, individuals who do not fall within the protected class status defined by affirmative action law can experience difference as defined by one of the aforementioned dimensions of cultural diversity.

In the college student population, administrators and faculty may observe representation of students in the dimensions identified by the external and internal dimensions of diversity. The number of diverse dimensions implies that, in order to successfully retain students from diverse backgrounds, educators must gain and exhibit a level of cultural competence. According to Munoz, DoBroka, and Mohammad (2009), a faculty member's skill in connecting with the culture of his/her student is critical to addressing disparities and in creating a supportive institutional environment.

Research Question

The effect of specific dimensions of diversity on engagement in cultural diversity interactions was examined as the focus of this study. It was anticipated that the resulting analysis would reveal new and useful data to inform best practices in student development and cultural diversity management for postsecondary institutions and lead to enhanced educational experiences as a desired outcome. The research interest of the NSSE study is comprehensive and divides the general topic of student engagement into the five smaller dimensions: Active and Collaborative Learning, Enriching Educational Experience, Supportive Campus Environment, Level of Academic Challenge and Student-Faculty Interaction (National Survey of Student Engagement, 2009).

The hypothesis for this research topic was that there would be a significant difference between student engagement in diversity interactions for each year spanning

2005-2008**.** The null hypothesis Multivariate Analysis Of Variance analysis model was as follows: H_0: $\mu_1 = \mu_2 = \mu_3 = \mu_4$. Thus, there would be no difference between the development of seniors as shown by mean scores of diversity interaction test items on the NSSE. The primary research question for this study is stated as follows:

Primary Research Question: Is there difference in the year-to-year responses for student engagement in diversity interactions and does the difference vary by race and gender?

In addition to the primary research question posited above, the following secondary questions were also examined:

Secondary Research Question 1: How do college student experience the college environment?

Secondary Research Question 2: Are all student experiences similar?

Secondary Research Question 3: What factors affect the student experience?

Secondary Research Question 4: Are students aware of institutional efforts?

Limitations

The use of a secondary analysis research design limited the researcher to data that could be inaccurate and incomplete (Human Dimensions, n.d.) and inherent in the design of the study was the fact the researcher was limited to using only data that already existed. Another potential problem inherent in working with pre-existing data involved compatibility of the primary research focus and the proposed secondary focus as identified by Kiecolt and Nathan (1985). The authors raised the following questions in outlining limitations of a secondary analysis research design: (1) how well did the topic addressed by the original research project match those of the proposed project and (2) did the benchmarks incorporated in the NSSE survey lend themselves to analyzing and

developing answers for the present questions? A further complication of this design is the assumption required of the researcher that survey participants provided accurate and truthful responses to the questions. The final limitation of this research design was the difficulty in identifying data obtained for subpopulations within the large scale dataset. It was not possible to match participant responses to specific students for the purpose of analyzing retention outcomes.

Delimitations

The NSSE survey instrument is administered annually to students enrolled as first-time, full-time freshmen and to students enrolled as full-time seniors. In order to strengthen the results of the analysis, the decision was made to select and analyze only the responses of the senior participants rather than include the responses of the freshmen. Theoretically, students enrolled as seniors received the greatest amount of exposure to institutional efforts to provide diversity interactions. The results of their exposure during their tenure in college should be greater than those of first-time freshmen who have received significantly less exposure.

Significance of the Study

By analyzing current NSSE data for Valdosta State University, best practices in diversity interaction and student development specific for this institution were examined and recommended for implementation. Additionally, the results of the study were used to expand the research to empirically link diversity interaction efforts and higher education learning outcomes, specifically those focusing on student engagement. Effective diversity initiative models could be identified, categorized, and aligned with the individual characteristics of institutions seeking to initiate their own effective diversity initiatives.

In sum, the results of the study contributed to current research by further refining earlier studies and can be shared with practioners such as higher education administrators and faculty who understand that their responsibility is to develop a vision for their institution by incorporating meaningful cross-cultural interactions and encouraging student participation in them. Such leaders are also aware of the need to implement plans for change in the student population while avoiding actions that would weaken their efforts and goals.

Chatman (2008) offered additional evidence to indicate widespread support for the use of diversity management and higher education commitment to it through the examination of *amicus curiae* briefs submitted in support of the University of Michigan as a part of the defense in *Grutter v. Bollinger.* A total of 64 *amicus curiae* briefs were submitted and included representatives in academics, labor unions, corporations, and such retired military personnel including the chairmen of the Joint Chiefs of Staff and well known military leaders such as Generals Norman Schwarzkopf and Wesley Clark.

One brief outlined the success of diversity management in preventing the failure of a formerly segregated military. The brief described a period during the "1960s and 1970s of demoralizing and destabilizing internal racial strife" (p. 15). In describing conditions in the marines it stated, "White officers were simply unaware of intense African-American dissatisfaction with job assignments and the perceived lack of respect …" (p. 15). That "African-American troops, who rarely saw members of their own race in command positions, lost confidence in the military as an institution" (p. 16). The military assessed its race problem as "so critical that it was on the verge of self-destruction" (p. 16).

Major U.S. corporations such as General Motors joined in the support cultural diversity as an educational imperative by stating that "General Motors depends upon the University of Michigan and similarly selective academic institutions to prepare students for employment" (p. 1) and that "In General Motors' experience, only a well educated, diverse work force, comprising people who have learned to work productively and creatively with individuals from a multitude of races and ethnic, religious, and cultural backgrounds, can maintain America's competitiveness in the increasingly diverse and interconnected world economy" (p. 2). General Motors asserted that the preparation they desired required interaction among students possessing the differences, "actual interaction with peers of different races is far superior to merely reading or watching a movie about racial issues" (p. 10). The bottom line for General Motors was that "Having high-level employees who possess cross-cultural competence is essential for a business to profit from these vast market opportunities." (p. 13).

Definitions

For the purposes of this study, the following terms are defined as follows:

1. Classroom Interactional Diversity: The extent to which campuses provide classroom opportunities for students from diverse backgrounds to interact with one another across racial and ethnic lines (Stony Brook University Diversity Glossary, n.d.).

2. Community: A cohort of people having common goals, rights and privileges – where no one is advantaged or disadvantaged because of who they are (Stony Brook University Diversity Glossary, n.d.).

3. Culture: A learned set of values, beliefs, customs, norms, and perceptions shared by a cohort of people that provide a general design for living and a pattern for interpreting life

(Stony Brook University Diversity Glossary, n.d.).

4. Cultural Capital: Standards of cultural expression and definitions of valued abilities that are characteristic of socially and economically dominate class in society (Stony Brook University Diversity Glossary, n.d.).

5. Demographic Change: The transformation of the structure of a population accompanying change National Center for Education Statistics (n.d.).

6. Disadvantaged: A historically oppressed cohort having less than sufficient resources to fund all of basic needs; without expendable income. 2. A cohort characterized by disproportionate economic, social, and political disadvantages (Stony Brook University Diversity Glossary, n.d.).

7. Diversity: Individual differences (e.g., personality, learning styles, and life experiences) and cohort/social differences (e.g., race/ethnicity, class, gender, sexual orientation, country of origin, and ability as well as cultural, political, religious, or other affiliations) that can be engaged in the service of learning (Making Excellence Inclusive, 2010).

8. Ethnicity: A social construct which divides people into smaller social cohorts based on characteristics such as shared sense of cohort membership, values, behavioral patterns, language, political and economic interest, history, and ancestral geographical base (Stony Brook University Diversity Glossary, n.d.).

9. Inclusion: The active, intentional, and ongoing engagement with diversity—in people, in the curriculum, in the co-curriculum, and in communities (intellectual, social, cultural, geographical) with which individuals might connect—in ways that increase one's awareness, content knowledge, cognitive sophistication, and empathic understanding of

the complex ways individuals interact within systems and institutions (Making Excellence Inclusive, 2010).

10. Intellectual Engagement: Use of the concept of cultural diversity to bring meaning to, or enhance the meaning of, academic concepts (Stony Brook University Diversity Glossary, n.d.).

11. Interactional Diversity: The extent to which campuses provide opportunities for students from diverse backgrounds to informally interact with one another across racial and ethnic lines (Stony Brook University Diversity Glossary, n.d.).

12. Minority/Minority Status: Term used to describe a segment that represents a relatively smaller percentage of the overall population of a cohort (Stony Brook University Diversity Glossary, n.d.).

13. Minority: The term "minority" includes Blacks, Hispanics, Alaskan Natives or American Indians, and Asian or Pacific Islanders (Stony Brook University Diversity Glossary, n.d.).

14. Minority Influence - The presence of a few cohort members who hold opinions that are different from those of the majority leads to increased divergent thinking and perspective taking (Antonio, Chang, Hakuta, Kenny, Levin, & Milem, 2004).

15. Prejudice: Exerting bias and bigotry based on uniformed stereotypes (Stony Brook University Diversity Glossary, n.d.).

16. Privilege: Power and advantages benefiting a cohort derived from the historical oppression and exploitation of other cohorts (Stony Brook University Diversity Glossary, n.d.).

17. Protected Classes: Cohorts identified in Federal Law (minorities, women, disabled

persons, and Vietnam Era Veterans) that are specifically protected against employment discrimination (Stony Brook University Diversity Glossary, n.d.).

18. Socioeconomic Status – A measure of individual's income, amount of education, type of occupation held, or neighborhood of residence (Stony Brook University Diversity Glossary, n.d.).

19. Stereotype: To categorize people based on an artificial construction of a certain cohort designed to impart the "essence" of that cohort, which homogenizes the cohort, effacing individuality and difference (Stony Brook University Diversity Glossary, n.d.).

20. Structural Diversity: the proportion of students from underrepresented populations that are present in the total student population Gurin, Dey, Hurtado & Gurin, (2002).

21. Under Representation: Term used to describe a situation where in a lower number of protected class employees are represented than parity would predict. Once under utilization is quantitatively established, an employer must 1) demonstrate that the under utilization is the legitimate effect of a Bona Fide Occupational Qualification (BFOQ) or results from business necessity; or 2) develop an affirmative action program with specific, action-oriented steps to overcome this under utilization (Stony Brook University Diversity Glossary, n.d.; University of Idaho Diversity Dictionary, n.d.).

Organization of the Study

This study was organized into four sections in addition to references and appendices. After the introductory chapter, which outlines the impetus of the cultural diversity movement in schools, colleges, and employers, Chapter 2 provides a review of the current literature in the following areas: diversity in America, diversity of the student body on college, and university campuses, diversity practices in colleges and universities,

laws that impact diversity, and types of diversity. Chapter 3 explains the research design, data analysis, and includes an explanation of the design change from an Analysis Of Variance (ANOVA) to a MANOVA analysis. Chapter 4 details the results of the study and Chapter 5 offers a summary of the findings and recommendations for future research.

Summary

If colleges and universities are to aid the country in maintaining its workforce and tax base despite demographic changes in the composition of its population, they must do so by developing student development activities designed to increase cultural awareness, cultural acceptance, and cultural sensitivity. Incorporating diversity interactions aid in creating an institutional environment sensitive to a segment of the student body that continues to increase while preparing graduates to successfully function in the global work environment. As postsecondary institutions adapt their student development activities to respond to the changing demographics of the recruitment pool and the changing needs of the employment sector, they must simultaneously measure the effectiveness of those interventions to identify best practices (Howard-Hamilton, Phelps, & Torres, 1998). The NSSE survey instrument can be used to provide benchmarking data on diversity interactions and college student development. The research question(s) of this study, answered through the use of MANOVA and ANOVA, identified the role that specific dimensions of diversity play in influencing the interactions of activities designed for student development.

Chapter II

REVIEW OF LITERATURE

Laws that Impact Diversity

The foundation of the modern diversity movement is based in several watershed court cases and federal laws that were enacted during the mid-twentieth century. The most influential and well-known laws and court cases include: *Brown v. the Board of Education of Topeka* of 1954; the *Civil Rights Act* of 1964, and *Plessey v. Ferguson,* 1896. The ruling of the 1954 *Brown v. the Board of Education of Topeka* Supreme Court case reversed the common "separate but equal" doctrine established in 1896 by the *Plessy v. Ferguson* Supreme Court Case. Implementation of the *Brown v. the Board of Education* holding required school systems to provide public education to all students regardless of race. The implementation of the ruling attempted to eliminate segregation by requiring that majority and minority school systems combine resources to become one (Conneely, 2008). Although *Brown v. the Board of Education of Topeka* referred primarily to primary and secondary schools, institutions of higher education were also required to desegregate in order to provide equal access (Cornell University Law School Legal Information Institute, 2010). Prior to *Brown v. the Board of Education,* the United States functioned under the "separate but equal" doctrine established under the "Jim Crow" period of American civil rights (Conneely, 2008). The United States Congress enacted laws to support a separate but equal system as a reaction to the elimination of slavery in 1865 (Conneely, 2008). Jim Crow legislation, which was enforced from 1877

to 1964, required that African Americans use separate public transportation and public accommodations, and attend segregated public schools. The 1896 *Plessy v. Ferguson* Supreme Court decision upheld the right of a Louisiana rail car company to maintain separate facilities for Blacks and Whites as long as all facilities were equal (Conneely, 2008). This ruling provided the legal foundation for the prevailing law governing services and facilities throughout the country and upheld the separate but equal doctrine as the law of the land. (Conneely, 2008).

In 1954 access to postsecondary education was dramatically impacted after the *Brown v. the Board of Education* decision. Under this Civil Rights ruling "all persons shall be entitled to the full and equal enjoyment of the goods, services, facilities, privileges, advantages, and accommodations of any place of public accommodation as defined in this section, without discrimination or segregation on the grounds of race, color, religion, or nation." (Cornell University Law School, Legal Institute, 2010; Conneely, 2008).

The *Civil Rights Act* of 1964 was enacted to ameliorate the past injustices that occurred during the era of racial segregation and its separate but equal doctrine. The reality of the separate but equal doctrine was separate but unequal due to the inequity in funding provided to public facilities and educational institutions for African Americans (Conneely, 2008). African American schools were established with lower teacher pay, lower school funding, and lower resources. The impact of inequitable resources was the reduction of educational opportunities and diminished access to higher education.

Although the *Civil Rights Act* of 1964 is considered the foundation of civil rights legislation, other laws have been enacted to more comprehensively address societal issues

of discrimination and prejudice. These laws include the *Equal Pay Act* of 1963, which made it illegal to pay different wages to men and women if they perform equal work in the same workplace; the *Age Discrimination in Employment Act* of 1967, which made it illegal to discriminate against anyone aged 40 or older due to age; the *Rehabilitation Act* of 1973, which made it illegal to discriminate against an individual with a disability in the federal government; the *Pregnancy Discrimination Act* of 1978, which amended the *Civil Rights Act* of 1964 to make it illegal to discriminate against a woman because of pregnancy, childbirth or a medical condition related to pregnancy, or childbirth; and the *Americans with Disabilities Act* of 1990, which made it illegal to discriminate against a qualified individual with a disability in the private sector as well as state and local government (EEOC.gov, 2010).

The legislated changes that occurred during the 1950s and 1960s required organizations to address issues of discrimination or segregation or face the legal consequences associated for violating civil rights law (Plummer, 2003). Organizations made changes due to fear of retribution from community activists, laws, or values/ethics. Many organizations were concerned that the unrest brought about by community activists would impact their ability to function. Other organizations were motivated by the desire to maintain compliance with civil rights law and avoid intervention with federal equal employment opportunity agencies and affirmative action rulings. Still other organizations initiated changes to reflect the ethical mission of their personal philosophies. As civil rights law has evolved into the diversity movement of today, a fourth cause of organizational change occurred; and that is profit. Organizations now recognize that managing organizational diversity is critical to enhancing effectiveness and maintaining a

competitive edge (DeLeon, 1995).

As employers and organizations have responded to the laws, mandates and personal motivations to become more culturally inclusive, postsecondary institutions have also responded. Maintaining a competitive edge in the field of higher education is expressed through sustaining and increasing student retention and program completion (Howard-Hamilton, Phelps, & Torres, 1998). Despite legal challenges disputing the legality of the civil rights law established in 1964, the Supreme Court has upheld the need for diversity as a "compelling state interest" in enriching the educational experience of college students. The most recent Supreme Court decision, *Grutter v. Bollinger*, (2003) narrowed the ability of institutions of higher learning to use race as a component of the admissions process (Chang, Denson, Saenz, & Misa, 2006). Although colleges and universities can no longer use mechanical scoring systems to assign points based on race to identify and admit applicants from underrepresented populations, they are permitted to use strategies that allow a critical mass of diversity within the student population.

Researchers have confirmed that the benefits of diversity impact the individual student, as well as the institution, and even impact the economy and society at large. According to Chang et al. (2006), "the vitality, stimulation, and educational potential of an institution is directly related to the composition of its student body, faculty, and staff" (p. 431). Many colleges and universities implement such activities as targeted recruitment of underrepresented students; high school mentoring and tutorial programs; articulation agreements with community agreements; need based financial awards; and race-sensitive admissions policies. Such policies have positively impacted the structural diversity of many colleges (Pike & Kuh, 2006).

The Changing Face of America

This study sought to further existing research in the areas of higher education best practice, diversity interaction, and student development theory. A significant amount of research has been conducted in the area of diversity interaction and student development as an educational outcome (Maruyama, Moreno, Gudeman, & Marin, 2000). Milem, Chang, and Antonio (2005) broadly define diversity operationally for the field of higher education as "engagement across racial and ethnic lines comprised of a broad and varied set of activities and initiatives" (p. 4). This review of the literature outlines the critical need for continued research and change due to significant changes in the racial and ethnic composition of the student recruitment pool and the static results of previous higher education diversity management practices (Day, n.d.).

As colleges and universities across the nation attempt to recruit students from present and future recruiting pools that are influenced by shifting racial demographics, they also encounter questions regarding potential impacts on instructional and other services that may be needed to prevent regression enrollment of minority student groups, maintain and increase perseverance, and improve completion rates. This review focused on the intersection of student engagement in diversity interactions and the outcomes of such interactions on student development.

Demographics

Positive student development outcomes have gained increasing attention as the change in the racial composition of the student body shifts (Pascarella & Terenzini, 1991). The change in civil rights focus from affirmative action to cultural diversity management is important given the changes in the racial composition of the United States

(Campbell, 1996). The 2000 U. S. Census indicates that the United States is undergoing a profound demographic shift (U.S. Census Bureau, 2000) that includes rapid growth in the minority population and a decline in the birthrate for the majority population. According to the U.S. Census Bureau, by 2050, the proportional shares are predicted to shift quite dramatically (Population Profile of the United States, 2000). Less than 53% would be non-Hispanic White; 16% would be Black; 23% would be Hispanic origin; and 10% would be Asian and Pacific Islander. This change in the racial composition of the American population will have a cascading impact on American society in the form of increased representation of minority groups.

In addition to the changes in the racial composition of American society, significant changes in the population by age have been identified. The cohort of individuals born after World War II commonly referred to as "baby boomers" has begun to enter retirement age. A significant percentage of Americans has reached, or will soon reach, retirement age (U.S. Census Bureau, 2000). This is supported by the 2000 Census rate which documented a 28% increase in the number of people aged 34 to 64 and a 4% decline in the number of people aged 18 to 30. The larger population of retirees and smaller number of work force aged individuals will create shortages of employees for all sectors of employment.

Over the 30-year span, 1990-2020, the nation's youth population (ages 0 to 19 years) is projected to decline (Campbell, 1996). In 1995, the nation's youth comprised 29% of the total population. A drop of two percentage points in the adolescent rate has been projected over the next three decades. Although several sub-groups within the American population are experiencing rates of growth, the overall rate of population

growth is projected to decrease during the next six decades by approximately 50% (United States Census Bureau, 2000). The decrease in the rate of growth is attributed to the aging of the population. From 2030 to 2050, the United States is projected to grow more slowly than ever before in its history (United States Census Bureau, 2000). As indicated earlier, the change in the racial composition of the American population is projected to cause numerous changes throughout the national economy.

For example, the decrease in the number of Americans eligible for work is projected to reduce the workforce pool and cause a top-heavy population distribution in which the number of individuals of retirement age is greater than the number of individuals eligible for work (Kraft & Furlong, 2004). The disproportionate representation of individuals of retirement age is predicted to cause greater strain on many of the nation's economic mechanisms (Kraft & Furlong, 2004). Another example of this cascade effect is the United States Social Security program, which provides financial assistant to eligible citizens of retirement age. According to the authors, it is projected that by the year 2017, the costs of Social Security will be greater than the revenue generated. Should the Social Security Trust Fund be exhausted, funds to support the program will be drawn from general tax revenues. General tax revenues may be smaller than previous years due to the shrinking pool of working-age citizens. If the college recruitment of underrepresented populations is unsuccessful, general tax revenues may also be affected by the shrinking pool of working-age degree holding citizens. Many leaders in higher education and corporate America recognize the oncoming crisis in maintaining the nation's economic competitiveness that may be triggered by the onset of the compositional population change, and they understand that effective diversity

strategies may be the most appropriate approach to prevent the crisis (Campbell, 2000).

As the racial and ethnic demographics change across the United States, many sectors of society recognize the need to adapt and plan accordingly. Changing patterns, such as increased growth in the Hispanic population and a decline in growth in the Anglo population, will produce negative trends in the areas of educational access, economic growth, poverty, and mobility (Carter, 2006). Negative trends in educational access, economic growth, poverty, and mobility are predicted because individuals identified in underrepresented populations tend to complete high school, and attend and/or complete college, in fewer numbers than their majority counterparts.

Carter (2006) illustrated the extent of the disparities regarding the number of minority citizens who may be unprepared for the workforce by stating, "when comparing cohorts of individuals in their late twenties, more than one-third of Caucasians have at least a bachelors degree, but only 18% of African Americans and 10% of Hispanics have attained bachelors' degrees" (p. 35). Increases in minority residents and decreases in majority residents may result in fewer educated workers as minority citizens tend to enroll in, and complete, K-12 and higher education programs in significantly fewer numbers than majority citizens. Institutions of higher education can benefit from cultural diversity management by sustaining or increasing the available pool of potential students, by more effectively preparing their graduates for employment in the global workplace, by enriching class discussion, by increasing opportunities for interaction across areas of dimensional difference and by indentifying additional potential applicants such as international students.

Effective management of diversity initiatives may be addressed through a

systematic framework. According to Plummer (2003), diversity management can be divided into categories by human systems including: individual, cohort, organization, community, and society. Diversity practioners can create change by developing interventions targeted to one or more of the levels identified as human systems (Taras & Rowney, 2007). An example of an intervention targeted specifically to the individual or cohort level, is the use of awareness and skill building. Diversity interactions throughout a student's career can be designed to greatly enhance or develop his/her awareness and skill in the area of diversity.

Impact of Demographic Change

As a microcosm of American society, colleges and universities have been impacted by the demographic change. The change in the racial composition of the higher education student body is also accompanied by an increase in students from other diverse cohorts (Pope, Mueller, & Reynolds, 2009). The authors noted that international students, returning adult students, students with disabilities, veterans, students with differing religious backgrounds, gay, lesbian, bisexual, and transgendered students have increased significantly. The change in representation in the student body expands the previous definition of diversity beyond race and beyond Black and White (Pope et al., 2009). These changes in the student body support the need to create a campus environment that supports success for its constituency by creating a sense of belonging and produce graduates capable of functioning effectively in the workplace.

The percentage of American college students who are minorities has been increasing (National Center for Educational Statistics, 2010). In 1976, 15% were minorities, compared with 32% in 2007. Much of the change from 1976 to 2007 can be

attributed to rising numbers of Hispanic and Asian or Pacific Islander students. During that time period, the percentage of Asian or Pacific Islander students rose from 2% to 7% and the Hispanic percentage rose from 4% to 11%. The percentage of Black students was 9% at the beginning of the time period and it fluctuated during the early part of the period before rising to 13% in 2007 (NCES, 2010).

Studies have examined the factors surrounding student development. A more specific group of studies have examined the components of student development necessary for a well developed graduate. In their study, Kuh, Gonyea, and Palmer (2001) compared the level of engagement of commuter students compared to residential students. Research into this segment of the student population is significant in that the cascading shifts in population may also impact the living arrangements of future college students, leading to an increase in the commuter student population. The researchers determined that the further away from campus a student lived or commuted, the less likely a student was to use the resources of an educational institution. Based upon the results of their study, the authors recommended that more must be done to increase and enrich commuter student involvement in learning.

Pascarella (2001) determined that student engagement was necessary for a positive college outcome and that student engagement activities were based on student time spent on course-related activities and other educationally-focused activities. The study completed by Kuh et al. (2001) focused on NSSE survey responses from the 2000 and 2001 administration at 470 colleges and universities across the United States. A total of 105,000 first-year and senior respondents were analyzed using separate one-way ANOVA studies in which commuter status and residential status served as the grouping

variables. The results of the study confirmed that although commuter students expend just as much effort as other students on classroom related activities, they are less likely to engage in the many educational resources that the institution provides. Gansemer-Topf, Saunders, Schuh, and Shelley (2004) used the one-way ANOVA model to examine the influence of institutional spending on student engagement. The researchers compared institutions participating in the Documenting Effective Educational Practices study (DEEP) to their non-DEEP peers in the area of resource allocation. In another study, Gansemer-Topf and Schuh (2004) confirmed the link between resource allocation and retention and graduation rates for private colleges. In attempting to confirm generalizability for the larger post-secondary field, the researchers expanded the research design to include colleges identified in several levels of the Carnegie Classification system (The Carnegie Foundation for the Advancement of Teaching, 2007).

In identifying colleges and universities with student development outcomes, the researchers selected DEEP participants because of their "higher than expected graduation rates and scores on the NSSE" (Gansemer-Topf et al., 2004, p. 1). DEEP participants, as well as their peers, were grouped by their form of control-public or private-and by their Carnegie Classification: Doctoral, Universities; Masters Universities; Public Baccalaureate Colleges; Private Four-Year Colleges; and Selective Private Four-Year Colleges (The Carnegie Foundation for the Advancement of Teaching, 2007).

Using the grouping data, as well as the data obtained through the Integrated Postsecondary Education Data System (IPEDS) - Institutional Characteristics Survey, Finance Section, and Fall Enrollment Survey (IPEDS Datacenter, 2010) - the researchers determined that there were no significant differences in money spent per student between

DEEP and non-DEEP public Masters and Doctoral institutions. They also determined that there were no significant differences in percentage of money spent on various areas between DEEP and non-DEEP public Master's and Doctoral institutions. The researchers concluded that strategic policy and practice rather than resource allocation, influenced student retention and graduation rates.

Advantages and Disadvantages of Change

In an attempt to understand the new labor pool and consumer pool, corporate organizations discovered the need for diversity management as a business tool. Moini (2006) cited Dr. Rohini Anand, the Chief Diversity Officer of the nation's largest food and facilities management services company, Sodexo (Gaithersburg, MD), for recognizing the need for inclusiveness. "As the nation's labor pools shrinks, diversity-elite companies will win the talent. Diversity and inclusiveness are critical to company growth" (p. 60). In addition to producing graduates from the new recruitment pool, corporations are expecting colleges and universities to provide graduates capable of successfully functioning in the new workplace.

Although many in the corporate field and many in higher education espouse the need for increased diversity and inclusiveness, there are just as many who do not connect increased diversity with increased learning or increased excellence (Park and Denson, 2009). In order for diversity strategies to be successful in higher education, a unified effort is critical to its success. Many in higher education support the inclusion of diversity in the curriculum. However, there are those who oppose the concept of cultural diversity in higher education. Park and Denson (2009) have identified significant segments in the higher education field that oppose the increase of diverse student populations and/or the

inclusion of diversity in the curriculum. The researchers cite a 2000 UCLA Higher Education Research Institute faculty survey (The American College Teacher, UCLA) which revealed that although 90% of faculty agree that racial and ethnic diversity in the student body contributes to the educational experience of all students, 30% of faculty felt that promoting diversity leads to the admission of too many underrepresented students. In addition, the survey revealed that 39% of faculty respondents felt that student applicants of color were not as qualified as non-minority applicants and that admitting a more diverse student body compromised the academic standards of the institution. When faculty view diversity as a simultaneous compromise of academic standards, a negative message may be sent to students of color that they are unwelcome (Park & Denson, 2009).

In order to provide more expansive research on faculty attitudes toward diversity, Park and Denson (2009) developed a variable they referred to as "diversity advocacy" to identify faculty views on racial and ethnic diversity and to analyze data collected from a national dataset. The composite variable included faculty attitudes regarding individual commitment to promoting racial understanding and individual faculty views on the role of diversity in undergraduate education. Data used for the study were collected as part of triennial national survey (The American College Teacher, UCLA) of higher education faculty by the Higher Education Research Institute (HERI). By conducting the study, the authors sought to answer the following questions: how do faculty of different races, demographic cohorts, and departments vary in their attitudes toward diversity and what are some of the background characteristics, activities, and attitudes that predict diversity advocacy. Through their analysis, Park and Denson were able to confirm that an

individual faculty diversity advocacy identity is influenced by a variety of traits, backgrounds and values. Results of the analysis indicated that diversity advocacy is strongly related to political orientation, incorporating race, ethnicity, and gender into teaching and research along with maintaining community involvement (Park and Denson, 2009). In addition, women, older faculty, and faculty of color tended to score higher, Faculty in the liberals arts scored higher than faculty in the areas of science, technology, engineering, and math.

The work completed by Park and Denson (2009) confirmed that college and university faculty do not abandon their personal beliefs at the classroom door. The attitudes of faculty regarding commitment to diversity and incorporating diversity in the curriculum are critical to the development of a positive campus climate and, therefore, critical to the recruitment, retention, and graduation of students from underrepresented backgrounds. Faculty attitudes are also critical to transmitting positive attitudes toward cultural diversity to college graduates in preparing them to be part of the workforce in a global environment (Park and Denson, 2009). Faculty is responsible for designing and teaching the curriculum, as well as conducting research and setting campus standards. Students are transitory as they flow through the university; faculty is more stationary and serves as the feeding system for future department heads, deans, and college presidents. The intersection of a declining majority population, an increasing minority population, increasing gaps in college attendance rates of minority population, and lack of support for diversity from a significant portion of the faculty clearly support the need for specific diversity management strategies if higher education is to continue and thrive.

Diverse Students on Campus

Langer (1978) and Piaget (1971) theorized that humans function on a daily basis by adhering to data collected and categorized into schemes, stereotypes, and scripts and that cognitive dissonance breaks the cycle of automatic thinking. Reducing automatic thinking or mindlessness allows an opportunity for active thinking and developmental growth. Addressing sensitivity to cultural diversity through the use of this concept provides the necessary tools for colleges and universities to encourage growth in this area (Jayakumar, 2009)

In their research on culturally competent teachers, Diller and Moule (2005) stated that the dividing line between a successful teacher and unsuccessful teacher was the ability to develop cultural competence. Although their research specifically addressed teachers, their findings can be applied to all employees, and thus all future employees, as students enrolled in colleges and universities. Students experiencing successful growth in the area of cultural sensitivity are willing to challenge their own long-held assumptions. Such students enter the workforce able to work effectively with individuals from cultures other than their own. They have mastered a set of awareness, sensitivity, and skills to support cross-cultural interaction and problem-solving, The authors suggest that "recognizing biased language and media, possessing the ability to address stereotypes, and understanding oppression and racial identity development are indicators of cultural competence" (p. 3).

Through the use of diversity management strategies, a thriving college campus can be created as the population of the student body changes. Diversity is changing on the campuses of colleges and universities and is increasing as the largest surge of college-

aged entrants since World War II has begun in recent years to enter the recruitment pool (U.S. Department of Education, 2002). In 1998–1999, there were 2.5 million U.S. high school graduates, according to the National Center for Education Statistics (2000). By race and ethnicity, 70.7% were White, 12.9% were Black, 10.8% were Hispanic, 4.7% were Asian or Pacific Islander, and 1.0% were American Indian or Alaskan Native (U.S. Department of Education, 2002). Although minorities have made gains in college attendance and completion, greater action is needed to prevent to an ever-widening achievement gap between minority and majority populations (Stuart, 2009). In seeking to impact the diversity of the college student population, higher education institutions must examine all the categories of the college student experience. This includes access to postsecondary education, retention of underrepresented students, and increased graduation of underrepresented students (Berkner & Chavez, 1997). Access to postsecondary enrollment is affected by many factors, such as enrollment in college preparatory courses, completion of college admission application, and completion of college entrance examinations. Studies such as the National Education Longitudinal Study (NELS) of 1988 (Berkner & Chavez, 1997) have shown that African American students, Hispanic students, and students with low socioeconomic status are less likely to take college preparatory courses, to apply to colleges and take college entrance exams, and to enroll in four-year institutions than are other students. In addition to completing all of the procedural steps along the highway to postsecondary education, another less finite factor impacts the rate of students from underrepresented backgrounds who attend college. Students from underrepresented backgrounds must possess the desire to attend college.

The first step in gaining access to postsecondary education is the concept of student aspiration (Berkner & Chavez, 1997). A high school student must want or expect to continue his/her education, and then make plans about when and where to enroll. Those planning to attend four-year colleges and universities must also complete two appropriate steps: taking a college entrance examination such as the Scholastic Aptitude Test (SAT) or American College Test (ACT), and applying for admission. The presence of educational aspirations and expectations has often been found to be related to postsecondary attendance. In the NELS 1988 survey, as early as in the eighth grade, the expectation of completing college was directly related to family income and parental levels of education (Berkner & Chavez, 1997). Among eighth graders from low-income families, 59% expected to finish college, compared with 76% from middle-income and 92% from high-income families. Hispanic eighth graders were less likely to expect to finish college than either Whites or Asians.

Despite successful college efforts, and the resultant increases in the racial and ethnic makeup of the student body, achievement gaps still exist between non-minority and minority college students (Access to Postsecondary Education, 1997). Among all college-qualified seniors who enrolled in postsecondary education, Hispanics were less likely than any other racial and ethnic cohort to attend a four-year institution. Instead, college-qualified Hispanics were more likely than any other racial and ethnic cohort to attend a public two-year institution. College-qualified Hispanics were also less likely to take college entrance examinations and submit an application for admission to a four-year institution compared with Asian, White, and Black college-qualified students (Access to Postsecondary Education, 1997).

Retention Rates of Minority Students

Tinto (2006) was one of the earliest researchers to establish the concept of student retention. His work helped to shift causation from the individual skills and motivation of each college student to the impact that institutional environment had on student decisions to continue. Extensive research has now shown that college student retention can be attributed to a number of factors. Research has indicated that possible barriers to retention of students of color include inadequate high school preparation, inadequate study habits, the imbalance in gender representation of students of color on most campuses, unsuccessful college transitions, and poor goal-setting patterns (Wohlgemuth, Whalen, Sullivan, Nading, Shelley, & Wang, 2007). Fisher (2007) explored an additional three factors in successfully completing a college degree: minority status, socioeconomic status, and first generation status as they impact college student transition. The authors discussed the traits exhibited by first generation students that cause difficulty in completing degree requirements. First generation students tend to have weaker academic preparation, fewer academic and financial resources, and less exposure to the academic environment in their home (Wohlgemuth et al., 2007). First generation students often feel less prepared and have a greater fear of failure than compared to their non-first generation counterparts.

Socioeconomic status is another significant factor affecting student perseverance (Wohlgemuth et al., 2007). Student financial aid has increased low income student retention to levels similar to those of students from middle and upper income backgrounds. Student aid in the form of gift aid, loans, and Federal Pell Grants all reduced the likelihood that a low-income student will drop out (Tinto, 2006). Although

the two factors are distinctly different, socioeconomic status and minority status frequently intersect in affecting access to postsecondary education. Farmer-Hinton and Adams (2006) theorized that the impact of minority status of college access is due to a lack of social or cultural capital. In their study, the authors examined the sociological constraints of isolated disadvantaged communities. They argued that lack of social capital occurs in racially and/or socioeconomically homogeneous communities that are frequently negatively impacted by joblessness and poverty. These isolated communities lack the necessary information needed to encourage students to prepare for, apply to, and gain acceptance to a postsecondary institution. The lack of social capital outlined by Farmer-Hinton and Adams further exacerbates the inadequate high school preparation, inadequate study habits, and poor goal setting habits. Concepts such as high school preparation are communicated through informed social networks and social networks serve as the building blocks of social capital, deficits caused by poorly informed social networks represent larger deficits in social capital.

Graduation Rates of Minority Students

According to the National Center for Education Statistics (2010) approximately 57% of first-time students seeking a bachelor's degree or its equivalent and attending a 4-year institution full time in 2001–02 completed a bachelor's degree or its equivalent at that institution in 6 years or less. This statistic refers to the cohort of first-time, full-time, students seeking a bachelor's degree or its equivalent who began attending a 4-year institution in 2001 and who completed a bachelor's degree or its equivalent 4, 5, and 6 years later. The National Center for Education Statistics also reported that between 1971 and 2000, the percentage of 25- to 29-year-olds that had completed a bachelor's degree or

higher increased from 17% to 29%; however, the rate in 2009 was similar to the rate in 2000. This serves as an indication that the results from strategies created to increase college student success have grown static and that new strategies are needed to continue the increase in the college student graduation rate.

When reviewing the data for race, between 1971 and 2009, the percentage of students that had attained a bachelor's degree increased from 19% to 37% for Whites, from 7% to 19% for African Americans, and from 5% to 12% for Hispanics (Campbell, 1996). This increase represented an 18% increase for Whites, a 12% increase for African Americans, and a 7% increase for Hispanics. Although the trends appeared to be positive, the increases indicated that an achievement gap still exists between majority and minority college students despite the use of various minority recruitment and retention strategies implemented by colleges and universities as a result of the civil rights movement.

During this period, the achievement gap in bachelor's degree attainment between Blacks and Whites increased from 12 to 18 percentage points, and the gap between Whites and Hispanics increased from 14 to 25 percentage points. Between 1990 and 2002, the percentage of Asians/Pacific Islanders who had attained a bachelor's degree increased from 42% to 56%; however, between 2002 and 2009 this percentage remained relatively stable (Campbell, 1996). Between 1990 and 2009, the gap between Asians/Pacific Islanders and Whites increased from 16 to 19 percentage points.

Higher Education Diversity Practices

New strategic interventions in diversity management may be the answer to continued achievement gaps in underrepresented cohorts. In the higher education setting, the concept of cultural diversity and diversity-based management are still relatively new

concepts when compared to similar efforts in the private sector (White, 1995), but recognition of the importance cultural diversity management is increasing. The question of how cultural diversity impacts the higher education institution is twofold. Higher education cultural diversity proponents must address its importance to faculty and staff as well as its significance to students. As the basis for its foundation, proponents of cultural diversity in higher education draw upon the arguments put forth in the groundbreaking cases reviewed by the United States Supreme Court. For instance, Engberg (2007) cited a statement from Justice Powell in the *Bakke* case that "exposure to a range of diverse experiences and ideas encourages the type of experimentation, questioning, and creativity that underlies the central mission of higher education" (p. 284).

In addition to the foundation provided by groundbreaking court cases, researchers such as Milem, Chang, and Antonio (2005) confirmed that when campus communities are more racially and ethnically diverse, they create richer and more varied educational experiences that result in enhanced learning and better preparation for involvement in a democratic society. Many institutions recognize this impact on its student and employee experiences and have recently drafted and adopted diversity management plans; more commonly referred to as diversity initiatives or diversity plans (Wilson, Andrews, & Leners, 2006; Porta, 2002). University officials recognize that sensitivity to cultural differences, or the lack thereof, impact the rate of applications for admissions, the rate of enrollment, the rate of student retention and degree completion, and the institutional image among its contributing alumni and the general public.

As universities and colleges compete for students and their accompanying tuition revenue, administrators are forced to identify cost effective methods to ameliorate factors

that negatively impact admission rates, dropout rates, and transfer rates (Campbell, 2000). The diversity initiative has been developed by many college officials as a method to broadly communicate commitment to provide opportunities to students and reduce the loss of student-generated funding sources. One example of the impact of cultural diversity on the student experience is the difference between various student cultures in coping skills as exemplified by accessing the use of the institutional counseling center. According to Chiang, Hunter, and Yeh (2004), African American and Latino college students tend to rely on informal coping sources to a greater degree than their White counterparts. This can be attributed to the collectivistic worldview of both cultures which places emphasis on cohort, interdependence of the family, and extended social network. This is in contrast to the Eurocentric worldview which emphasizes individualism. Similarly, differences in cultural dimensions can impact student engagement in their coursework, activities, and support network.

Types of Diversity

Higher education researchers suggest that the structural diversity inherent in increased minority enrollment provides colleges and universities with the opportunity to address issues of stereotyping and discrimination in order to better prepare students for life and work in a diverse society (Pike & Kuh, 2006). Providing a quality education for postsecondary students requires the exposure to, and interaction with, peers and authority figures from other cultures. Such experiences also require the employment of diverse faculty and staff. Diverse representation in the faculty and staff population of the postsecondary institution provides the multitude of perspectives needed in developing curricular strategies designed to provide students with classroom and extracurricular

diversity interactions. According to Edwards (2009), underrepresented minority faculty members are needed to serve as mentors and inspire students for careers in higher education and healthcare practice. In addition, a diverse faculty culture provides the foundation for directing and evaluating research that is focused on cultural competency.

Enriching the educational experience of college graduates may be the primary argument for addressing cultural diversity in the postsecondary setting, but Taras and Rowney (2007) identified additional benefits of diversity within the college classroom. One benefit is that recruitment of students from diverse backgrounds increases the applicant pool of potential students (Nunez, 2009). This is significant due to the declining birthrate among the majority population which will result in a corresponding projected decline in the number majority college applicants.

Another benefit of cultural diversity management in higher education is the ability to produce graduates who can function effectively and thrive in diverse employment settings (DeLeon, 1995). One might assume that the simple exposure of one cultural cohort to another, such as students attending a postsecondary institution with students from diverse backgrounds, would foster the development of positive cultural diversity perspectives. This numerical representation of diverse cohorts in one common setting is known as structural diversity (Gurin et al., 2002). According to the authors, the existence of diversity among a postsecondary student population does increase the likelihood of interaction across cultural cohorts but does not guarantee it.

Although structural diversity can aid in supporting student engagement in cultural diversity interactions, in order for cross-cultural learning to occur, additional components of diversity must be provided by the postsecondary institution. Kuh (n.d.) asserted that

the amount of time and energy students give to purposeful educational activities is the single best predictor of learning and development. Research has indicated that a link can be made between curricular experiences and learning outcomes. Kuh cited the work of Chickering and Gamson (1987) in identifying the seven categories of good educational practice: (1) student-faculty interaction; (2) cooperation among students; (3) active learning; (4) prompt feedback; (5) time on task; (6) high expectations; and (7) respect for diverse talents and ways of learning.

Studies indicate that structural diversity is positively related to informal interactional diversity (Gurin et al., 2002; Pike & Kuh, 2006). In other words, students attending institutions with diverse student populations confirmed interacting more frequently with diverse peers than did students attending institutions with homogeneous student populations (Pike & Kuh, 2006; Fisher, 2008). Given that the multiple perspectives inherent in the representation of diverse college students in the classroom enhances the classroom experience for all members of the class, Gurin et al. (2002) reiterated that structural diversity alone is not effective in impacting the perspectives of the student population and demonstrating the link between the curricular experiences and learning outcomes. The researchers suggest that two additional forms of diversity interaction are necessary to impact student perspectives regarding cultural diversity: informational interactional diversity and classroom diversity. Informal interactional diversity occurs outside of the classroom in such settings as residence halls, campus events, and social activities. Classroom diversity involves the exchange of knowledge of other cultures and experience with peers of other cultures in the classroom.

A study conducted by Engberg (2007) continued the work of Gurin, Dey,

Hurtado, and Gurin (2002) in attempting to understand of how diversity experiences influence students' development of a pluralistic perspective. This is an outcome that speaks to the role of diversity in preparing students to become successful in their careers and become civic leaders in a diverse society. The study conducted by Gurin et al. (2002) provided empirical evidence of the link between diversity management initiatives in the postsecondary setting and learning outcomes (Doherty, 2008). Engberg (2007) extended the earlier work to identify the link between diversity management initiatives and learning outcomes across the student population by major.

Results of the study indicated that while structural diversity was an important indirect influence on students' cultural disposition, students who were enrolled in institutions with higher levels of structural diversity were more likely to engage in positive interactions across race, which in turn produced a positive effect on their cross-cultural learning (Gurin et al., 2002; Wong, Seago, Keane, & Grumbach, 2008). The study also indicated that the effects of structural diversity on students' cultural dispositions were most obvious for students majoring in the arts/humanities and engineering.

Hurtado (2007) outlined three reasons for the importance in linking diversity and postsecondary education: educating future American citizens and the next generation of leaders and office holders; achieving greater coherence in undergraduate preparation, and finding ways to integrate diversity into the mainstream functioning of the university setting. A study conducted by Nokes, Nickitas, Keida, and Neville (2005) supported Hurtado's work by emphasizing the importance in educating future American citizens and leaders by measuring the impact of service learning components in the student

nursing curriculum. By using the Inventory for Assessing the Process of Cultural Competence (IAPCC) among healthcare professionals, which measures the level of cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire, the Analysis of Critical Engagement Inventory, and the California Critical Thinking Disposition Inventory, the authors of the study initiated pilot tests to identify the impact on community and civic engagement. Quantitative results of the study were inconclusive but qualitative results, in the form of reflective journaling, were positive (Nokes, Nickitas, Keida, & Neville, 2005).

In an earlier study, Gurin (2002) researched a theory linking diversity with learning outcomes in the postsecondary setting. The theory is based upon the early work of a developmental psychologist Erik Erikson (1946, 1956), who stated that identity develops best when adolescents are afforded a psychological freedom in which they are able to experiment with differing social roles before determining their permanent social and political commitments. Engberg (2007) cited the work of Pascarella and Terenzini (1991) in identifying important developmental shifts in students' attitudes, beliefs, and perspectives throughout the undergraduate educational process. These shifts in student attitudes, beliefs, and perspectives represent major changes in their social and political attitudes as undergraduates. He also cited the work of Newcomb, Koenig, Flacks, and Warwick (1967) in confirming that those attitudes once formed remain stable after matriculation from college. This permanence factor includes a review of student attitudes and beliefs after 25 years and 50 years. Gurin et al. (2002) suggested that when such an undergraduate experience includes a quality interaction with diversity students are more likely to think actively.

In many instances, students' experience their first encounters with students from differing cultures and differing viewpoints in the higher education setting (Gurin et al., 2002). The imperative of postsecondary institutions to include diversity experiences for undergraduate students is supported by the limitation of intercultural experiences of incoming college students coupled with the concepts outlining the crystallization of student beliefs after completion of college. Gurin (1999) stated that structural diversity in the student body is linked to an increased chance that students will interact with someone of a different race or ethnicity and engage in discussions of diversity. He also indicated that cross-racial sustained interaction increases the impact on student growth and development and positively impacts student retention and overall satisfaction with college as well.

The Engberg (2007) study included a mechanism designed to identify the skills and dispositions that represent a pluralistic orientation. These include "the ability to see multiple perspectives; the ability to work cooperatively with diverse people; the ability to discuss and negotiate controversial issues; openness to having one's views challenged; and tolerance of others with different beliefs" (p. 285). Wilder and Pope (2005), identified deficits in the area of higher education diversity management that represent an example of the long-term impacts of cultural diversity implications. The purpose of their study was to assess diversity awareness and sensitivity within a cohort of pre-service teachers completing their student teaching experience. The results of the study indicated that those participants who had more frequent personal interactions with others of diverse backgrounds were more likely to have higher scores on valuing diversity, which may suggest a higher comfort level in working in settings with higher percentages of students

with diverse backgrounds. The need for frequent personal cross-racial interaction in successful diversity awareness building aids diversity proponents in touting the necessity for and advantages of cultural diversity. Significant effort must be provided in structuring classroom diversity interactions that lead to positive, rather than negative, learning outcomes.

Gurin and Nagda (2006) suggested that in order for cross-racial interaction to be successful, it should be based on the intercohort theory created by Allport (1954). Allport theorized that intercohort interaction was successful when all members of the cohort have equal status, have the opportunity to get to know each other well, cooperate with each other toward common goals, and when contact is supported by relevant authorities. Cultural diversity when managed well can provide the benefits mentioned earlier. Unmanaged or poorly managed cultural diversity can lead to counterproductive classroom discussions, activities and conflict; negative experiences for students; marginalization of students not viewed as part of the mainstream; and ultimately deficits in student retention (Taras & Rowney, 2007). Managed improperly, cultural diversity can lead to difficulties in teamwork. Language differences, verbal and non-verbal communication differences, differences in communication styles, and even language proficiency can contribute to negative or positive experiences for students in the classroom.

Antonio et al. (2004) used a 2 x 2 factorial design to investigate the impact of minority influence in cohort discussions. The authors used the theory of minority influence as the framework of their research which posits that the presence of a small number of cohort members who hold differing opinions from the major can increase

divergent thinking and perspective taking. The results of their study revealed that prolonged contact with others from racial diverse backgrounds has stronger and longer lasting effects on complex thinking that participation in single discussion cohort. This study confirmed the work of earlier researchers that structural diversity alone will not foster the development of cultural sensitivity and awareness among college graduates. Sustained interaction is the primary factor impacting development of complex thinking (Gurin et al., 2002).

Another factor contributing to the classroom experience regarding cultural diversity is the paradigm of faculty member orientation. Ofori-Dankwa and Lane (2000) theorized that many college faculty members function under one of four paradigms: neutrality, similarity, diversity, and diversimilarity. Faculty members who are similarity focused emphasize the similarities of varying cultures. Faculty members who are diversity-oriented place great emphasis on cultural differences but rarely emphasize similarities. Instructors who use the neutrality paradigm give little attention to differences or similarities among varying cultures and finally, while instructors who use diversimilarity emphasize differences and similarities equally. Schneider (2006) argued that institutions of higher learning place more emphasis on the importance of the faculty member on the interactional diversity component of the student experience.

The interactional diversity component of the student experience has far reaching effects. One example of this effect is the training of elementary and secondary teachers. Eberly, Rand, and O'Connor (2007) examined the dispositions of teachers regarding cultural diversity and its implications for teacher preparation programs. The authors assessed dispositions using Kegan's Orders of Consciousness (Kegan, 1979) as the

framework for their study that involved perceptions, concrete, abstractions, and abstract systems as the cognitive tools for each level. Although the authors recommended that further research is needed, their study suggested higher order consciousness levels lend themselves to teacher dispositions that are culturally sensitive and aware (Helm, 2006).

Summary

In the early stages of the civil rights movement, colleges and universities developed admission policies that gave preference to students from underrepresented populations in an effort to build structural diversity in the student population. In some cases, students who did not meet all of the academic requirements for admission were admitted. This, in turn, provided opponents of the civil rights movement an opportunity to attach an additional stigma beyond the conflict by fostering the perception that the focus on diversity diminished opportunities for others (Kraft & Furlong, 2006). The attacks on affirmative action, specifically race based admissions, and the dramatic changes predicted to occur in the country's population served as driving forces for diversity initiatives created as a strategy to reduce the educational and financial achievement gap facing minority populations and ultimately American society. As an effort to develop graduates who challenge stereotypes and explore individual levels of cultural awareness, colleges and universities moved beyond the simple step of creating diverse student bodies referred to by Gurin (2000) as structural diversity and initiated activities to engage students in interaction with their peers across racial and ethnic barriers. Universities and colleges sought to develop graduates capable of integrative complexity in thinking and problem solving (Antonio et al., 2004). Researchers are still in the early stages of determining the efficacy of these initiatives.

Chapter III

METHODS

This study sought to answer the following primary and secondary research questions:

Primary Research Question: Is there difference in the year-to-year responses for student engagement in diversity interactions and does the difference vary by race and gender?

In addition to the primary research question posited above, the following secondary questions were also examined:

Secondary Research Question 1: How do college students experience the college environment?

Secondary Research Question 2: Are all student experiences similar?

Secondary Research Question 3: What factors affect the student experience?

Secondary Research Question 4: Are students aware of institutional efforts?

By conducting a secondary analysis of institutional data taken from the National Survey of Student Engagement (NSSE) administered at Valdosta State University (VSU) for the 2005-2008 period. The study involved the following scope of work: obtaining approval from the Institutional Review Board (see Appendix B); conducting a secondary analysis of the institutional data from the NSSE and reviewing findings for areas of yearly gain and significance; and summarizing all information generated through the analysis with recommendations for further research. Recommendations serve as the basis for policy changes that might strengthen the efforts of postsecondary institutions to enhance student

development through engagement in diversity interactions and thus develop successful, culturally competent graduates. The responses for 11 questions selected from the local administration of the 2005 - 2008 yearly administration of the NSSE were analyzed to develop the study.

To determine the influence of race and sex on measures of diversity for the respondents of the NSSE at VSU, it was necessary to design the study as a quantitative examination. Information from the study can supplement existing research and aid universities and colleges in recruiting and retaining more students from under-represented backgrounds. The success of postsecondary schools in increasing the number of graduates from under-represented populations would help to maintain and/or increase the number of educated individuals needed to maintain the American workforce despite the decline in majority births.

Three variables were used as independent variables: race, sex, and cohort. Eleven diversity interaction variables from NSSE were used as dependent variables representing classroom diversity and informational interactional diversity. Data were examined using an MANOVA design. The research design was initially planned as an ANOVA analysis, however the MANOVA design provided a better design structure because it provided the ability to incorporate cohort data for comparison as a third independent variable. The MANOVA study design also provided a method for comparing the influence of sex, race, and cohort on student engagement in cultural diversity interactions on overall student development for the research question. This analysis provided a basis for the exploration of effects of diversity interaction on student development by comparing cohort samples from datasets for the years 2005-2008 (Hill, 1999).

Setting

Valdosta State University served as the setting for the research. VSU is a publicly supported university located in the southernmost region of Georgia (VSU Strategic Research and Analysis, 2010). Lowndes County, the county in which VSU is located, gained designation as a metropolitan statistical area after completion of the 2000 United States Census (U. S. Census, 2000). Although Lowndes County gained metropolitan status, the surrounding counties remain largely rural and agrarian.

In 1995, VSU was granted the designation of a regional university by the University System of Georgia with a designated service area of 41 counties in South Georgia, although many of its students disclosed permanent residence in counties throughout the entire state (VSU Strategic Research and Analysis [VSU SRA], 2010). According to the 2008-2009 Student Profile (VSU SRA, 2010), four of the top five counties of student enrollment are located within the Atlanta Metropolitan Area. The most recent student profile by race indicates that 68% of students self-declared as White and 32% as minority or other. Within the minority category, 26% self-declared as African American, 1.8% of students as Hispanic, 1.6% of students as Asian/Pacific Islander and .28% as American Indian/Alaskan Native 1.9% as Multiracial, and .10% as unknown (VSU SRA, 2010). The racial composition of the student body contrasted significantly when compared to the racial composition of VSU faculty. According to the 2008-2009 VSU Fact Book (VSU SRA, 2010) 88% of faculty self-declared as White, 4 % self-declared as African American, and 9% self-declared as Other.

Although many students enrolled at VSU originate from the metropolitan Atlanta area, the majority of VSU students came from the South Georgia region. The South

Georgia region contrasts significantly in the areas of educational attainment and income when compared to the metropolitan Atlanta area. The surrounding region of South Georgia is predominately rural, with high rates of high school dropout and low per capita income levels (United States Census Bureau, 2000). The deficits in household income and educational attainment reflected vast disparities in educational attainment and per capita income as compared to other, more metropolitan areas of the state. For instance, according to the 2000 U. S. Census Data, median family income for the state of Georgia was $40,411 annually. Median family income for Echols County, one of the counties within the VSU service region, was $27,700 annually. During the same time period, the percentage of Georgia citizens holding bachelor's degrees or higher was 14.7% as compared to the much lower 9.3% for Echols County. VSU has a general student population of 12,300 students and a 32% minority student population (Strategic Research and Analysis, 2010). The target population for this study was defined as all students enrolled at VSU.

Sample

The data for this study were collected from randomly sampled senior VSU students who completed the NSSE. A total of 2,926 randomly selected students were surveyed annually during the years 2005, 2006, 2007, and 2008. Of this number, a total of 1,546 respondents were classified as seniors and 1,380 were classified as freshmen. This number represented 52.8% of the total number of NSSE respondents. Table 3.1 lists demographic information for the study sample. Permission to use the data was granted by the Director of the VSU Office of Strategic Research and Analysis (see Appendix C).

Sampling and surveying of the student population and analysis of the survey results were completed by NSSE staff. A sample population was randomly selected from a data file supplied to NSSE by VSU listing the total population for all enrolled first-year and senior students. The selected sample included one-half of the first-year students and one-half of the senior students (Survey Administration, 2010). Selected students were contacted by NSSE throughout February and March of each year with an e-mail announcement and an electronic invitation to complete the Web version of the survey. Once participants completed the survey, the responses were submitted directly to NSSE. Upon completion of the analysis, survey results were returned to VSU for interpretation and application (Survey Administration, 2010).

The sample size was taken from the total student enrollment of VSU. Response rates by class (senior respondents) of 33% for Year 1 (2005), 32% for Year 2 (2006) 24% for Year 3, and 45% for Year 4 were achieved for the sample. It should be noted that cohort three experienced a significant drop in participation as compared to cohort one and cohort two. Cohort four experienced a significant increase in participation. According to the Office of Strategic Research and Analysis this could be attributed to changes in administrative leadership during 2007 and 2008.

Table 3.1. Demographic Information of Study Sample

Demographic Variable		Data Reported for VSU Population
Cohort/Race/Gender		
Cohort 1-2005	White	
	Female	4,454
	Male	2,919
	Black	
	Female	1,333
	Male	668
	All Other	
	Female	313
	Male	196
Cohort 1-2006	White	
	Female	4,398
	Male	2,889
	Black	
	Female	1,396
	Male	736
	All Other	
	Female	292
	Male	229
Cohort 3-2007	White	
	Female	4,407
	Male	2,953
	Black	
	Female	1,395
	Male	794
	All Other	
	Female	300
	Male	240
Cohort 4-2008	White	
	Female	4,498
	Male	2,954
	Black	
	Female	1,722
	Male	875
	All Other	
	Female	334
	Male	251

Source: VSU Enrollment Updates 2005, 2006, 2007, and 2008

Instrument

Kuh et al. (2001) described the NSSE as an assessment instrument designed to measure the extent to which students enrolled in four-your colleges and universities take part in education practices that many research studies indicate are strongly associated with high levels of learning and personal development (see Appendix A). This study examined the institutional results the NSSE data collected for VSU on student engagement in the area of cultural diversity and the associated learning outcomes related to it. NSSE survey creators designed the instrument to provide valid and reliable results across a range of institutional settings and categories. In addition to qualitative analyses such as cognitive interviews and focus cohorts, the NSSE survey was analyzed using four different quantitative approaches across four cohorts of students: African American, Asian American, Hispanic, and White; and three institutional types: Historically Black Colleges and Universities; Hispanic-Serving Institutions, and Predominantly White Institutions. (Kuh, et al., 2007). The analyses included: (1) Cronbach's alpha reliability analysis; (2) Pearson's product moment correlations; (3) Regression analysis; and (4) Correlations between activities and student outcomes.

Instrument Reliability

The NSSE survey instrument is composed of 28 multi-part questions designed to inform best practice benchmarks in five areas: Level of Academic Challenge, Student-Faculty Interaction, Supportive Campus Environment, Active and Collaborative Learning and Enriching Educational Experiences (Survey Administration, 2010). The creators of the NSSE survey instrument used Cronbach's alphas for each of the benchmark areas to confirm reliability. The results of the Cronbach's alpha analyses suggest a high degree of

reliability for three out of the five benchmark areas. Table 3.2 (Survey Administration, 2010) lists the Cronbach's alpha values for seniors for the NSSE benchmark for each year it was administered at VSU. The three benchmark areas that received high values were: Level of Academic Challenge, Student-Faculty Interaction, and Supportive Campus Environment. The remaining two areas, Active and Collaborative Learning and Enriching Educational Experiences, obtained lower values.

Table 3.2

Cronbach's Alpha Values for NSSE Benchmarks by Class/Year

Benchmarks	Cohort 1 (2005)	Cohort 2 (2006)	Cohort 3 (2007)	Cohort 4 (2008)
Level of Academic Challenge	.760	.761	.759	.763
Student-Faculty Interaction	.650	.747	.750	.750
Supportive Campus Environment	.750	.789	.795	.796
Active and Collaborative Learning	.640	.659	.669	.679
Enriching Educational Experiences	.780	.650	.646	.656

The NSSE Survey instrument was created to assess institutional progress in the five benchmarks that serve as indicators of best practice in the field of higher education (NSSE.Org, 2010). The five benchmarks are: (1) level of academic achievement; (2)

active and collaborative learning; (3) student interactions with faculty members; (4) enriching educational experiences; and (5) supportive campus environment.

The instrument creators designed the tool so that it accurately assessed self-reported data from students attending a variety of institutions (Kuh, Kinzie, Cruce, Shoup, & Gonyea, 2007). In developing the survey instrument, the design team considered the variety of postsecondary institutions and their varying missions. With this consideration in mind, the survey was designed to provide consistent results regardless of the type of institution, which could range from a Historically Black College or University (HBCU); a Hispanic-Serving Institution (HSI) or a Predominantly White Institution (PWI) (Kuh et al., 2007).

To obtain valid survey results, the instrument was analyzed using statistical analyses through the use of several statistical models and data analysis through the use of cognitive interviews and focus cohorts. For the statistical assessment of the instrument, five different statistical analyses across four cohorts of students: African American, Asian American, Hispanic, and White; and three institutional types: Historically Black Colleges and Universities; Hispanic-Serving Institutions and Predominantly White Institutions (Kuh et al., 2007). The analyses included:

1. Cronbach's alpha reliability analysis to compare consistency of NSSE benchmark scale scores of first-year and senior students attending different types of institutions
2. Pearson's product moment correlations to compare the patterns of relationships among the five NSSE benchmarks for different institutions and student cohorts

3. Regression analysis to determine if differences exist between students at different types of institutions, or from different racial and ethnic backgrounds, in the manner in which student engagement predicted gains in three areas: personal and social development, practical competence, and intellectual skills
4. Correlations between activities and compatible outcomes for students at
5. different types of institutions and from different racial and ethnic backgrounds for four types of engagement to measure the internal consistency of similar-content items.

Cognitive interview data was analyzed to identify understanding of the survey question and response options, performing the primary survey tasks such as retrieving information, and drawing conclusions. The initial two stages then served as the foundation for the third stage which was, determining how to respond (Kuh et al., 2007). The researchers reviewed interview data through the framework of participant complications. They identified such problems as: misunderstanding the survey terms, having difficulty retrieving information, making mathematical errors, and asking for clarification about the content of the question. Overall, students who participated in the cognitive research interviews and focus cohorts found survey questions to be clearly worded and easy to complete. They indicated that they found the format readable and easy to complete.

Procedure

The VSU Institutional Review Board application granted approval of this study. Data for this study were provided by the VSU Office of Strategic Research and Analysis. Data were initially collected by inputting individual respondents in a formatted Excel

(Microsoft Corporation, Redmond, MA) file. Once completed the Excel file was imported to an SPSS file for development of analysis models.

Data Analysis

To determine the proportion of explained variance between and within the cohorts a MANOVA was used. MANOVA is a "family of methods for testing hypotheses that involve the means of more than two cohorts" (Thorndike & Dinnel, 2001, p. 403). Sax (1988) suggested making every effort to gain the best combination possible in the four parameters of statistical inferences: power, significance criterion for rejecting the null or alternative hypothesis, sample size, and effect size.

Limitations

Due to the restricted access to NSSE respondents from other campuses, this study was limited in sample size to the respondents of one institution. This small sample size was further impacted by the rates of student participation. This limited sampling may include limited sampling of sub-cohort populations. The limited sampling of sub-cohorts made it difficult to obtain meaningful data and to develop inferences for those sub-cohorts.

In addition to the limitations specific to VSU, limitations within the NSSE survey instrument also existed. Due to its structure as a survey instrument, the NSSE is solely dependent on self-reported student observations. Individual students' perspective of their college experiences and interpretation of the survey questions limited the information of the survey. Also, while students were allowed to make general comments about the quality of their educational experience, they were not allowed to provide comments on their responses to specific survey questions. Another limitation of the NSSE instrument is

the lack of customization available to each institution. The survey is designed and administered by the NSSE organization and does not allow for changes to be made to the survey design or administration process by each institution. The survey questions are standard and are based on Likert-type scales. These restrictions limit the type of data and information that is available.

Also, while the NSSE can serve as a foundation for identifying aggregate institutional trends, the structure of the instrument does not permit the ability to track student growth by identifying student perceptions over time (Office of Institutional Assessment, 2010). It provides a snapshot view of student experiences. In addition, the survey results can only convey whether relationships exist. No conclusions about causation can be drawn from the analyses presented within. Finally, the NSSE provides a measure of student engagement but does not provide a measure of student learning. NSSE data can inform the development of student learning outcomes but should not be interpreted as a direct measure of outcomes.

Research Design

The MANOVA design was used to analyze a total of 1,546 responses of NSSE participants classified as seniors for each of the years the NSSE was administered at VSU (Survey Results, 2010). The analysis was limited to 11 variables relating to diversity interaction on the NSSE survey. Results were examined for each of the four years that the NSSE instrument was administered at VSU. Survey respondents were asked to disclose the extent of their involvement in specific institutionally related activities. The following variables, which were included in each year the survey was administered, are listed below:

1. Included diverse perspectives (i.e., different races, religions, genders, political beliefs) in class discussions or writing
2. Tutored or taught other students (paid or voluntary)
3. Had serious conversations with students of a different race or ethnicity than your own
4. Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values
5. Examined the strengths and weaknesses of your own views on a topic or issue
6. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective
7. Learned something that changed the way you understand an issue or concept
8. Institutional emphasis: Encouraging contact among students from different economic, social, and racial or ethnic backgrounds
9. Institutional emphasis: Providing the support you need to thrive socially
10. Institutional contribution: Working effectively with others
11. Institutional contribution: Understanding people of other racial and ethnic backgrounds

Summary

This study sought to identify the effect by race, by sex, and by cohort on diversity interactions of senior survey participants at a mid-size college in the southeast by comparing the scores of four cohorts of NSSE respondents for VSU students classified as seniors during the years 2005, 2006, 2007, and 2008 (n = 1,546). This chapter explained the instrument, sample, setting and procedures of the study by accessing the NSSE

dataset for each of the previously listed years and conducting data analysis through the MANOVA and ANOVA statistical analysis models. The results of the study will be reported in Chapter 4. Conclusions and recommendations for further research and application will be reported in Chapter 5.

Chapter IV

RESULTS

The objective of this quantitative study was to determine if there was a significant difference in student perceptions of diversity interactions between four cohorts of college seniors at Valdosta State University (VSU), using participant responses on the NSSE survey instrument administered each spring during the 2005, 2006, 2007, 2008 academic years The study also accounted for the impact of race and sex on each year of the participant responses. An overview of the statistical analysis selected to review the complex data regarding student diversity interactions is provided along with a presentation of the results of the analysis.

Research Questions

The impetus for this study originated from the need to identify the impact of institutional diversity efforts on students enrolled in college while still completing a college education. Many higher education institutions implement diversity activities to support learning outcomes and enhance student development and, as a result, increase the quality of the educational experience. However, the question of whether students recognized these efforts led to a further question of whether students enrolled in college recognized and acknowledged the impact of diversity activities on their world view of personal philosophies. The following research questions were addressed in the study:

Primary Research Question: Is there a difference in the year-to-year responses for student engagement in diversity interactions and does the difference vary by race and gender?

In addition to the primary research question posited above, the following secondary questions were also examined:

Secondary Research Question 1: How do college students experience the college environment?

Secondary Research Question 2: Are all student experiences similar?

Secondary Research Question 3: What factors affect the student experience?

Secondary Research Question 4: Are students aware of institutional efforts?

Statistical Procedures

Multivariate Analysis of Variance (MANOVA) was used to compare means between variable cohorts. A two part general linear model was conducted using Statistical Package for the Social Sciences (SPSS v. 17.0) (International Business Machines, Corp, Armonk, New York) software to examine any differences in the levels of diversity interaction between race, sex, and cohort on the levels of diversity interaction as measured by the NSSE. The first of the two part analysis conducted was the multivariate test. The results indicated that one of the seven categories exhibited statistically significant difference. The second part of the analysis conducted was the test of between-subject effects.

Two primary assumptions for MANOVA were evaluated. First Box's Test of Equality of Covariance Matrices was conducted (p (M) > .05). This analysis revealed non-significance for the F-value (F(858, 77542) = .275, p > .05. The null hypothesis is rejected because the covariances are not homogeneous and the assumption of

homoscedasticity is upheld.

Levene's Homogeneity of error variances was then evaluated using the Levene's test. Results showed that the assumption of homogeneity error variances among the cohorts of sex, race, cohort, sex and race, sex and cohort, race and cohort, and sex, race and cohort was violated for ten of the 11 dependent variables listed. Given these results, interpretation of main effects using Pillai's Trace proceeded as recommended by Mertler and Venetta (2005).

Variable Selection

The independent variables included in the analysis were sex (male and female), cohort (2005, 2006, 2007, and 2008), and race (Black, White, and All Other). Under the race variable an "all other category" was created because the number of survey respondents self disclosed was small (< 11%) and would potentially compromise respondent anonymity. The "all other category" encompassed the following races: American Indian or other Native American, Asian American or Pacific Islander, Mexican or Mexican American, Puerto Rican, Other Hispanic or Latino, Multi-racial, Other, and Prefer No to Respond (NSSE Multi-Year Variable Tracking Sheet Codebook, 2010). The use of a MANOVA model allowed the researcher to simultaneously account for the effects of race, gender, and year of participation on perceptions of student engagement in an institutional diversity setting across all 11 dependent variables.

Results

A MANOVA was calculated examining the effect of sex (male and female), race (white, black, and all other), and cohort (2005, 2006, 2007, and 2008) on 11 measures of student interactions. Results of the MANOVA procedure indicated that one of the seven

possible categories of effect yielded statistical significance by race, sex, cohort, race and sex, race and cohort, sex and cohort, and race, sex and cohort on 11 dependent variables of student interactions as evaluated by Pillai's Trace and *p*-value (see Appendix D). A multivariate test was first conducted to evaluate means of the variable cohorts. Using Pillai's Trace there was no significant effect of sex on student interactions, V = 0.14, $F(11, 1285) = 1.710$, $p > .05$. There was a significant effect of race on student interactions V= 0.14, $F(99, 11637)=.1.806$, $p <.05$. Follow-up univariate ANOVAs indicated that five of the 11 dependent variables were significantly impacted by race. Significantly impacted variables are listed as follows:

- Had serious conversations with students of a different race or ethnicity than your own $F(9, 1361) = 2.350$, $p = .012$.
- Tried to better understand someone else's views by imagining how an issue looks from his or her perspective $F(9,1361) = 2.719$, $p = .004$.
- Institutional emphasis: Providing the support you need to thrive socially $F(9, 1361) = 2.714$, $p = .004$.
- Institutional contribution: Working effectively with others $F(9, 1361) = 2.462$, $p = .009$.
- Institutional Contribution: Understanding people of other racial and ethnic backgrounds $F(9, 1361) = 2.040$, $p = .032$.

Tables 4.1 through 4.5 below provide additional data on each of the five dependent variables positively impacted by race. Descriptive data, such as the mean and standard deviation, provide a description of the range of responses for each variable.

Table 4.1. Summary of MANOVA Results-Question One

Dependent Variable	df	Mean	*F*	Sig	SD
Had serious conversations with students of a different race or ethnicity than your own	9	2.83	2.350	.012	.961

The *p* value in Table 4.2 indicates that there was a significant difference between cohorts by race ($p = .012$) in student attempts to communicate with students from different races. According to the data, over the four year span of the study, inter-cultural communication among students was affected by the race of the student. The mean score was 2.83 and the standard deviation was .961 indicating that most students fell within a small range of scores.

Table 4.2. Summary of MANOVA Results-Question Two

Dependent Variable	df	Mean	*F*	Sig	SD
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	9	2.89	2.719	.004	.832

The *p* value in Table 4.3 indicates that there was a significant different between cohorts by race ($p = .004$) in accepting the perspective of others. According to the data, over the four year span of the study, race impacted student ability and/or willingness of to accept the perspective of others. The mean score was 2.89 and the standard deviation was .832 indicating that most students fell within a small range of scores.

Table 4.3. Summary of MANOVA Results-Question Three

Dependent Variable	df	Mean	*F*	Sig	SD
Institutional emphasis: Providing the support you need to thrive socially	9	2.25	2.714	.019	.930

The *p* value Table 4.4 indicates that there was a significant different between cohorts by race ($p = .019$) in student perceptions of institutional supports to succeed

socially. According to the data, over the four year span of the study, race impacted student ability to participate in co-curricular activity. The mean score was 2.25 and the standard deviation was .930 indicating that most students fell within a small range of scores.

Table 4.4. Summary of MANOVA Results-Question Four

Dependent Variable	df	Mean	*F*	Sig	SD
Institutional contribution: Working effectively with Others	9	3.31	2.462	.009	.782

The *p* value in Table 4.5 indicates that there was a significant different between cohorts by race ($p = .009$) in student perceptions of institutional supports to work with individuals who express some form of difference. According to the data, over the four year span of the study, race impacted the way that students were instructed to work with others. The mean score was 3.31 and the standard deviation was .782 indicating that most students fell within a small range of scores.

Table 4.5. Summary of MANOVA Results-Question Five

Dependent Variable	df	Mean	*F*	Sig	SD
Institutional Contribution: Understanding people of other racial and ethnic backgrounds	9	2.71	2.040	.032	1.002

The *p* value in Table 4.6 indicates that there was a significant different between cohorts by race ($p = .032$) in the acceptance of other individuals. According to the data, over the four year span of the study, race served as a significant barrier in understanding and accepting others. The mean score was 2.71 and the standard deviation was 1.002 indicating that most students fell within a small range of scores.

Summary of Findings

This chapter included results of the eleven MANOVA analyses addressing the primary and secondary research questions. Results showed a statistically significant difference by race for five of the eleven dependent variables in the way participants perceived student diversity interactions across four years of the NSSE survey. The variables sex and cohort, as well as the combined effects of sex and cohort, race and cohort, and race, sex and cohort failed to significantly influence the dependent variables. These findings suggest students may experience institutional diversity engagement activities differently than their counterparts based on race. This is reflected in the variables that revealed the significant effect of race: activities involving cross-cultural communication, interactions, and opinions. Overall, these findings suggest with the exception of race in five of the outcomes for all years, students generally experienced the 11 diversity outcomes similarly during the four year span.

Implications for higher education administrators, policy makers and future researchers are discussed in Chapter 5.

Chapter V

DISCUSSION

Overview

Chapter 5 begins with a review of the objectives of the study and a summary of significant findings. Next, findings related to the central research questions posed are discussed in relation to previous studies on the function of cultural diversity in successful college student development. Implications for national and state policy makers, college and university administrators and policy makers are discussed. Finally, recommendations for future research and limitations of the study are presented.

Review of the Study Objectives

The purpose of this study was to identify and compare the educational gains between separate cohorts of seniors in the area of engagement in diversity interactions as identified by student participation on the National Survey of Student Engagement (NSSE) through a secondary analysis of a large-scale data set. Pascarella, Seifert, and Blaich (2010) explained the basis for the NSSE survey is in measuring the extent to which students engage in empirically proven best practices in undergraduate education in order to indirectly measure student cognitive and personal development during college.

Pascarella et al. (2010) further described the NSSE as one of the most widely used annual surveys of undergraduates in the country. A statement taken from the NSSE publication *Experiences That Matter: Enhancing Student Learning and Success*, (2008), confirmed that the NSSE survey has been completed by nearly1.5 million students at

almost 1,200 colleges and universities in the last decade (Indiana University (2007).

Data collected by the NSSE served as the focus of the study. Gurin et al. (2002) and Engberg (2007) have established an empirical link between cultural interactions and positive learning outcomes among student populations of many institutions. The empirical results of the NSSE study combined with the work of Gurin et al. and Engberg provided a solid foundation to extend research in this area and allow future researchers an opportunity to examine specific variables within this area. As an example, the current study sought to extend the work of the earlier researchers by examining the effect of student engagement in diversity interactions as an outcome.

The present study sought to examine the impact of three cultural diversity dimensions on the interactions among college students. The specific dimensions selected for this study were race, sex and cohort, and the goal was to identify the role of those dimensions as potential factors of influence on the cultural diversity interactions of students. The student cohort was limited to students classified as full-time seniors enrolled at Valdosta State University (VSU). It examined the influence of race, sex, and cohort as well as the combinations of those three independent variables, on responses to 11 dependent variables selected as representative of student diversity interactions on the NSSE survey instrument administered during the years 2005, 2006, 2007, and 2008.

For this study, diversity interaction was operationally defined as the extent to which campuses provide opportunities for students from diverse backgrounds to formally and informally interact with one another across racial and ethnic lines (Stony Brook University Diversity Glossary, n.d.). The following survey responses were selected as variables of diversity interactions:

1. Included diverse perspectives (such as different races, religions, genders, political beliefs) in class discussions or writing
2. Tutored or taught other students (paid or voluntary)
3. Had serious conversations with students of a different race or ethnicity than your own
4. Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values
5. Examined the strengths and weaknesses of your own views on a topic or issue
6. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective
7. Learned something that changed the way you understand an issue or concept
8. Institutional emphasis: Encouraging contact among students from different economic, social, and racial or ethnic backgrounds
9. Institutional emphasis: Providing the support you need to thrive socially
10. Institutional contribution: Working effectively with others
11. Institutional contribution: Understanding people of other racial and ethnic backgrounds (NSSE Survey Administration, 2010)

Significant Findings

In order to examine the influence of race, sex, and cohort on college student engagement in diversity interactions, a MANOVA using 11 questions from the NSSE as dependent variables, and the diversity dimensions of race, sex and cohort, as independent variables was conducted. The analysis results revealed that the influence of sex (F = 1.710, p = .066) and cohort (F = 1.273, p = .136) did not significantly influence college

student participation in diversity interactions. Also, the interactive variables of race and cohort (F = .956, p = .690), sex and cohort (F = .913, p = .610), race and sex (F = 1.190, p = .109), and race, sex and cohort (F = .996, p = .500) did not significantly influence college student participation in diversity interactions.

Of the three independent variables and the four interactive variables created from those variables, only race was found to have significant influence on college student interaction. Using Pillai's Trace (Pillai's Trace < .05) the influence of race was found to statistically significant influence the diversity interactions of college students (Pillai's Trace = 0.14). Based on the initial comparisons to determine the significance, further analyses were conducted to identify detailed differences for each item identified as significant through the use of ANOVAs. With race identified as the only statistically significant independent variable, an analysis was performed to identify the dependent variables influenced by independent variable of race. The statistical analysis indicated that there was a significant difference in the way that VSU students of different races experience the following dependent variables: cross-cultural communication, understanding the viewpoint of others, navigating the college social environment, working effectively with others, and understanding people of other racial and ethnic backgrounds.

There are many dimensions of cultural diversity which can be defined as individual differences in human dimensions (e.g., personality, learning styles, and life experiences) and cohort/social differences (e.g., race/ethnicity, class, gender, sexual orientation, country of origin, and ability as well as cultural, political, religious, or other affiliations) (Making Excellence Inclusive, 2010). For the purposes of this study, the

focus was limited to the dimensions of race, sex, and cohort as independent variables. In this study, the survey responses of 1,559 students classified as seniors during each year of the NSSE (2005-2008) was provided by the VSU Office of Strategic Research and Analysis on 11 survey items.

Discussion

This study examined the survey responses of VSU NSSE respondents to assess student perceptions of engagement in diversity interactions and determined the influence of race, sex, and cohort on those interactions. This analysis suggested a picture of students engaging in diversity interactions in a postsecondary setting with more commonalities than differences. It appears that VSU college students experienced diversity interactions similarly despite differences in gender. This is based upon the lack of statistical significance identified through the MANOVA analysis conducted using gender as an independent variable. It also appears that VSU students experienced diversity interactions similarly despite differences in cohort: meaning that despite a difference in the years in which students were surveyed student responses were similar. This is based upon the lack of statistical significance identified through the MANOVA analysis conducted using cohort as an independent variable.

The singular difference identified by the MANOVA analysis, was the influence of race. The influence of race was revealed to have a statistically significant influence of V= 0.14, $F(99, 11637) = .1.806$, $p < .05$. Follow-up univariate ANOVAs indicated that five of the 11 dependent variables were significantly impacted by race. Significantly impacted variables are listed as follows:

- Had serious conversations with students of a different race or ethnicity than your own $F(9, 1361) = 2.350$, $p = .012$.
- Tried to better understand someone else's views by imagining how an issue looks from his or her perspective $F(9,1361) = 2.719$, $p = .004$.
- Institutional emphasis: Providing the support you need to thrive socially $F(9, 1361) = 2.714$, $p = .004$.
- Institutional contribution: Working effectively with others $F(9, 1361) = 2.462$, $p = .009$.
- Institutional Contribution: Understanding people of other racial and ethnic backgrounds $F(9, 1361) = 2.040$, $p = .032$.

Several previous researchers (Gurin, Dey, & Hurtado, 2006; Gurin, 2002; Milem et al., 2005; Pike & Kuh, 2006) have examined the influence of diversity interactions on the development of the entire student population, as well as the broad experience of specific segments of students from diverse backgrounds in the college setting. Pike and Kuh (2006) examined the relationship between structural diversity, informal interactional diversity, and perceptions of the campus environment. Using data from the senior responses of the spring 2001 administration of the NSSE and the fall 2000 IPEDS institutional data collection, Pike and Kuh established a link between student development and interactional diversity. The authors used seniors' responses from the NSSE to obtain information about perceptions of the campus environment and informal interaction diversity. Data on institutional characteristics was taken from the National Center for Education Statistics' Integrated Postsecondary Data System.

The present study focused the scope of the investigation on the influence of the

variables sex, race, and cohort on student interactions. Chang et al. (2006) used Cooperative Institutional Research Program (CIRP) Freshmen Survey data from two years, 1994 and 1998, to examine the influence of diversity on student interaction. Results of the study revealed that the frequency of cross-racial interaction (CRI) on all of the three outcomes tested (openness to diversity, cognitive development, and self-confidence) were significant and uniformly positive. In addition, students who have higher levels of CRI tended to report significantly larger gains made since entering college in their awareness of and sensitivity to different races and cultures, and intellectual and social self confidence than their peers who had lower levels of interaction.

The current study supported the findings of the research of Chang et al. (2006) and corroborated the work of findings of Chatman (2008). Chatman's work on students enrolled at the University of California examined the influence of the frequencies of interactions on understanding of students from differing backgrounds with the following variables: wealth, religion, race/ethnicity, immigrant status, and politics. The purpose of Chatman's study was to examine whether or not significant opportunities for interaction among undergraduate students led to increased understanding of differences in others as well as a sense of belonging using the following measures: wealth, religion, race/ethnicity, immigrant status, and politics as variables.

An analysis of the variables revealed that over 40% of respondents reported that their understanding of others was often improved through personal interactions with other students who differed from them in terms of socioeconomic status, politics, and religion Chatman, 2008). Of the five measures identified by Chatman, discussions of race and

ethnicity were the focus of the largest number of interactions between students. Politics and socioeconomic status were less often the topic of student discussions. Religious differences were the next most frequently discussed, and racial and ethnic differences the most frequently discussed diversity issues. Of the total number of discussions the topic of race and ethnicity was attributed to 60% of them. The author attributed this larger number associated with race/ethnicity to obvious physical differences that were readily apparent to students.

The research completed by Chatman (2008) suggests that race/ethnicity is perceived to be the primary indicator of difference as well as the primary influence of interaction among college students. When the measures of socioeconomic status, religion, race/ethnicity, immigrant status, and politics were analyzed, race/ethnicity was revealed to be the factor with the greatest amount of influence. The present study supports Chatman's (2008) research by revealing that of the three variables of race, sex, and cohort only race was identified as a statistically significant measure of influence on student interaction.

Discussion of Research Questions

A further examination of the influence of race on the 11 diversity interactions identified as dependent variables suggests that less than half of diversity interactions were influenced by race. Based upon the results of the follow-up ANOVA analysis, the dimension of race impacted whether students had serious conversations with students from a race or ethnicity outside their own; felt that their college or university provided the support he/she needed to thrive socially; attempted to better understand the views of others by imagining how an issue looked from his or her own perspective; felt that the

institution provided the support he/she needed to work effectively with others; and felt that the institution provided the support he/she needed to understand people of other racial and ethnic backgrounds.

The remaining diversity interactions were not impacted by race, sex, or cohort. The independent variables analyzed in this study did not influence student exposure to diversity perspectives in class and in assignments; student engagement in conversations with other students possessing different religious beliefs, political opinions or personal values; peer tutoring of other students, student; student reflection to examine the strengths and weaknesses of their own views on an issue; student learning that changed the way the student understood an issue; encouraged contacted among students from different economic, social, racial or ethnic backgrounds, and encouraged student understanding of people of other racial and ethnic backgrounds. The following answers were developed for the primary and secondary research questions of this study:

Primary Research Question: Is there difference in the year-to-year responses for student engagement in diversity interactions and does the difference vary by race and gender?

In addition to the primary research question posited above, the following secondary questions were also examined:

Secondary Research Question 1: How do college students experience the college environment?

Secondary Research Question 2: Are all student experiences similar?

Secondary Research Question 3: What factors affect the student experience?

Secondary Research Question 4: Are students aware of institutional efforts?

College Student Experiences

Results suggest that a large segment of the college students at VSU experience the environment similarly. They have similar experiences with the exception of race. Although the analysis confirmed that gender and cohort did not affect the experiences of college students, the format of the survey, and the use of secondary data limited the ability to determine the manner in which race affected student experiences.

Similar Student Experiences

Although a large segment of students at VSU experience the environment similarly, race may affect the experiences of a smaller number of college students. As mentioned previously, the manner in which race impacted the student experience was not revealed by this study. Further research should be done to identify more details regarding the impact of race on student diversity interactions.

Factors Affecting the Student Experience

Of the three factors examined, race was the only factor that impacted the diversity experiences of some college students. Of the 11 scenarios representative of routine diversity interactions, only 5 were impacted by race. This suggests that communication with students of other races and the institutional supports needed for it are critical to some student experiences

Students Awareness of Institutional Efforts

Results of the analysis were inconclusive on this question. Additional research may reveal student awareness of institutional efforts to address cultural diversity.

Implications for Colleges and Universities

Results of the study provide additional data for future researchers to explore other independent variables that may have a possible impact on student development in the

area of diversity interaction and student sensitivity to diversity. Findings from this study revealed a significant difference in the category of race on the dependent variables. An interpretation of the results from the data analysis is provided with recommendations in the subsequent chapter.

The research attempted to confirm the relationship between diversity interactions of students and enhanced student engagement in the higher education setting. Corporate America has confirmed the positive results of incorporating diversity management into their management systems (De Leon, 1995). The author proposed that the incorporation of diversity awareness activities in business management practice was driven by quantitative data. For example, the U.S. Department of Labor (2000) predicted that the number of Hispanics entering the workforce between the years 1992 and 2005 would increase by 64%. The author also cited a Nestle Corporation (Glendale, CA) administrator in outlining the need to focus on diversity. Changing demographics of the workforce reflected a change in the recruitment pool in order to attract the best people; the consumer base had become more diverse and by having multiple perspectives from diverse employees, the company was better able to produce and market products effectively; and third, in order to be competitive, the company needed to be able to fully utilize all its employees (DeLeon, 1995).

Increasingly, employers recognize that successful employees are those employees equipped to effectively interact with coworkers and clients from cultures vastly different than their own (DeLeon, 1995). As business leaders communicate the needs of the future workforce to higher education leaders, efforts to incorporate diversity management into higher education management systems will increase (Jayakumar, 2008; Pewewardy

& Frey, 2002). VSU can provide leadership in developing a diversity model to assist universities in improving student retention through the use of effective diversity management strategies.

Results from this study confirmed that specific dimensions of diversity influence the interactions of college students. The results also suggested that of the various dimensions of diversity, race provides the greatest influence on student interaction. The present study revealed that of the three variables of race, sex, and cohort analyzed for their influence, only race served as a measure of influence in college student interactions. The results of the present study, when coupled with the work of Chatman (2008) as well as that of Chang et al. (2006), suggest race frequently serves as the primary measure of influence and other dimensions of diversity such as socioeconomic status, religion, race/ethnicity, immigrant status, and political beliefs serve as secondary dimensions of diversity. The analysis also suggested that an increased frequency of interaction resulted in an increase in student levels of cultural knowledge, awareness and sensitivity to students of different races. Information obtained through analysis of NSSE surveys revealed colleges would do well to focus the largest number of activities for diversity interaction among its student population on the topic of race and incorporate activities to support discussion of other dimensions as secondary factors. College student personnel and policy makers could possibly narrow their focus further by emphasizing activities that encourage participation in the five activities influenced by race as identified in the follow-up ANOVA analysis.

Recommendations

In response to the charge given to institutions of higher education from the employment sector, colleges and universities have developed efforts to produce graduates capable of functioning in a diverse working environment (DeLeon, 1995). Hurtado (2007) combined the research on the benefits of diversity on student learning to increase cultural awareness. Individuals who are educated in diverse settings are far more likely to work and live in racially and ethnically diverse environments after they graduate, and individuals who study and discuss issues related to race and ethnicity in their program of study and interact with a diverse set of peers in college are better prepared to function in a complex and diverse society. Increasing the structural diversity of the student body is essential to create the kind of learning environment needed for such growth and development.

In addition to the broad recommendations made to institutional administrators such as including diversity in the institutional mission statement, provide training workshops and symposia, and examining recruitment and retention policies for students, the analysis results suggest that VSU should designate a segment of its training and symposia topics to address the dimension of race. VSU should also identify student supports needed to encourage intercultural communication in extracurricular settings and encourage faculty to incorporate classroom activities that address the dimension of race.

Considerations

The purpose of this study was to examine the influence of race, cohort, and gender on student diversity interactions through empirical methods. Researchers have determined that in order to encourage student growth in the area of diversity awareness and knowledge students must have diversity experiences that exceed those gained by

merely attending a campus with structural diversity. Although structural diversity is significant, students must participate in interactional diversity experiences both in the classroom and informally through extracurricular activities to experience growth and development. The need for increased student development in the area of diversity awareness is based upon the significant racial and age related changes predicted to take place in the American population in the coming decades.

The demographic changes predicted to take place during the coming decades include changes in the racial composition of the population as well as changes in the percentage of retirement-age citizens as compared to citizens of working age. By the year 2050, the U.S. Census Bureau (2000) has predicted that the minority population will dramatically increase resulting in a non-minority population of less than 53%. In addition, the U.S. Census has predicted a 4% decline in the growth population that will negatively impact the working age subgroup. Both projections support the need to address the existing educational achievement gaps that exist between majority and minority citizens if the country is to successfully continue.

The projected population changes will impact colleges and universities due to a decrease in number of students eligible for recruitment. This impact could also impact student retention as students from diverse backgrounds experience interactions with students from other cultures that they perceive to be negative. In addition to student-to-student interaction, faculty-to-student interaction has a impact on college student success in diversity awareness and degree completion.

Supportive faculty members are critical to the success of the change in incorporating diversity interactions in the classroom. Research has shown that not all

faculty support diversity promotion. As many as 30% of faculty members believed that promoting diversity resulted in the admission of too many students from underrepresented backgrounds (Park & Denson, 2009). Commitment to diversity is critical to the incorporation of diversity interactions in the classroom. Park and Denson (2009) confirmed that the advocacy identity of an individual faculty member is influenced by a variety of traits and values. Those traits and values include such things as political orientation, gender, age, race or ethnicity and discipline. Interaction with students from other cultures and interaction with faculty will play an important part in the cultural environment that minority students encounter when attending a postsecondary institution. The cultural environment may impact the success of minority college students.

Strategies designed to create a positive cultural environment for all college students is one of the many activities implemented by colleges and universities. Research (Offenstein, Moore, & Shulock, 2010) has shown that strategies created to increase the general rate of college student success have grown stagnant and that new strategies are needed to continue the increase in the college student graduation rate. Between 1971 and 2009, the percentage of students who had attained a bachelor's degree increased from 19% to 37% for Whites, from 7% to 19% for Blacks, and from 5% to 12% for Hispanics. This increase represents an 18% increase for Whites, a 12% increase for Blacks, and a 7% increase for Hispanics (Campbell, 1996). Although positive, the increases indicate that an achievement gap still exists between majority and minority college students.

As universities and colleges compete for students and their accompanying tuition revenue, administrators are forced to identify cost effective methods to mitigate factors

that negatively impact admission rates, dropout rates, and transfer rates. University officials recognize the need to produce both a positive cultural environment and culturally aware graduates by managing all components of the diversity process. University officials understand that sensitivity to cultural differences or lack of it impacts the rate of applications for admissions, the rate of enrollment, the rate of student retention and degree completion, and the institutional image among its surrounding public as well as its contributing alumni (Diller & Moule, 2005). As colleges and universities implement practices in recruiting and retaining minority students to degree completion, researchers should continue to analyze models of postsecondary success to identify strategies that can be successfully generalized and used by institutions across the county.

Using the work of Pike and Kuh (2006), Gurin et al. (2002), Milem et al. (2005) as the basis of structural and interactional research, the present study suggested that college students participating in activities designed to foster diversity interaction are influenced by a number of factors and that the level of influence for each factor varies. The results of the study indicated that the level of influence by sex is not statistically significant nor is the level of influence by cohort. Race, however, does provide a minimally statistically significant influence on student interactions.

Limitations

With regard to the survey questions completed by the students in the present study, the lack of consistency of responses across each variable could be viewed as a limitation of the current study. Another limitation of the study may be that the students' survey responses were self-reported, thereby limiting the findings of the study. It is possible that participants may feel inhibited when they know they are being assessed. As

a result, they may not be completely truthful in responding. Despite this fact, self-report measures remain a commonly used means of gathering data with which to conduct educational research (Cohen & Manion, 1985).

The use of self-reported data is also a limitation of the study. Self-reported data is commonly used in research examining the effects of postsecondary activities (Cohen & Manion, 1985; Pike & Kuh, 2006). The validity and reliability of their use has been proven by many researchers. Pike (1995) and Pohlmann and Beggs (1974) confirmed that data collected from instruments requiring self-report are likely to be more valid under five conditions: the information requested is known to the respondents; the questions are phrased clearly and unambiguously; the questions refer to recent activities; the respondents think the questions merit a serious and thoughtful response; and answering the question does not threaten, embarrass, or violate the privacy of the respondent or encourage the respondent to respond in socially desirable ways. (Kuh, 2001).

In addition to the use of self-reported data, the lack of available funds to purchase data collected from other institutions was a limitation. Because the NSSE instrument was designed as an institution level measure of educational effectiveness, the costs associated with its use is significant. The cost of administering the instrument for one institution coupled with the additional cost of accessing data collected from other institutions can prove prohibitive. As a result, the focus of this study was limited to the responses of students enrolled at one institution. Analysis results may be influenced by factors unique to one institution and not generalizable to the larger population and may yield differing results when expended to include several institutions of similar size, mission, institutional control, and Carnegie classification.

Recommendations for Future Research

The primary suggestion for the direction of future research is to build on the present study by replicating it with changes to identify the influence of other dimensions of diversity using the same NSSE variables. In addition, studies are needed that explore a deeper understanding of the factors identified in the present study. The present study confirmed that race is a statistically significant factor influencing the way that students experience diversity interactions at one institution.

Future researchers are encouraged to increase the sample size and expand the study to include several institutions and to examine the influence of individual racial and ethnic categories (Black, White, Hispanic, Asian, Multiracial, etc.) on diversity interactions. Researchers are encouraged to investigate the way in which race influences the interaction and development of students exposed to it. Future researchers are encouraged to conduct an analysis of the NSSE data using a different methodology than the MANOVA analyses selected for the present study. This would enable the researcher to triangulate the results of both studies.

The analysis of race, sex, and cohort yielded strong data that could be incorporated in future studies on cultural diversity, student interaction, and student development. Future researchers are encouraged to deepen the knowledge surrounding the influence of race on diversity interactions as well as seek to identify factors that prevent sex and cohort from influencing student interactions despite serving as dimensions of diversity. Future researchers are also encouraged to examine the influence of other areas on student perception of engagement in diversity interactions. Subsequent research might focus on whether such student identity variables as athletics, major, age,

socio-economic status, first generation status, rural or urban origin, high school category (inner city, suburban, rural, public, private, or parochial) employment status during enrollment in college, county or state of residence significantly influence the perception of engagement in diversity interactions.

Additionally, the focus of this study was a comparison of cohorts identified as full time seniors. Future researchers are encouraged to examine a comparison that includes students enrolled with a different classification standing. The NSSE instrument is designed to collect the responses of first-time full-time freshmen as well as full-time seniors in its sampling population (National Survey of Student Engagement, 2009). Future researchers are encouraged to conduct research focusing on freshmen survey participants rather than senior survey participants. Analyzing the responses of survey participants identified as seniors provided an opportunity to identify the results of student development near the conclusion of a traditional college career time span, over the natural arc of the college student career. As Pike and Kuh (2006) indicated in their study, seniors were selected because the passage of time would provide increased opportunities for structural, informal interactional, and classroom interaction would be greater and yield increased results. In order to build upon the work completed by this researcher, future researchers are encouraged to compare the responses of students identified as first-time full-time freshmen to the responses of full-time seniors. Researchers could identify first-time, full-time freshmen and conduct a longitudinal study to track student growth over time. Finally, studies examining the attitudes of college administrators regarding the influence of race on diversity interactions to determine the impact of their views could be a useful to colleges and universities.

Conclusions

The goal of the present study was to investigate the relationship between race, sex, and cohort to student engagement in diversity interactions over a four year span at a single institution. Given that structural diversity and interactional diversity have been shown to affect student development (Gurin et al. 2002., Milem et al., 2005; Pike & Kuh, 2006), this study sought to identify specific variables of diversity and their influence on student development. This study revealed several important findings. The first finding was that of the three variables, race, sex, and cohort, only race was found to be statistically significant.

Of the 11 activities identified through the survey responses, five activities were found to have race as a statistically significant influence of interaction. Those five activities were cross-cultural communication, understanding the viewpoint of others, navigating the college social environment, working effectively with others and understanding people of other racial and ethnic backgrounds. The five diversity interaction activities found to be influenced by the independent variable of race support the claim made by Milem et al. (2005) that structural diversity in the student population leads to a wider collection of ideas and concepts and exposure to those wide ranging concepts increase student development. Project leaders can incorporate strategies to address the influence of race in fostering cultural change during the interactions identified in each of the survey questions.

As the race, age, and gender composition of the United States population continues to shift, the changes caused by the shift will continue to reflect a population that is significantly different than the population of previous generations (United States

Census, 2000). These changes are beginning to be reflected in the workforce pool and in the secondary and postsecondary educational system. Employers projected these changes earlier and, in an effort to anticipate and minimize the negative effects, have recognized that in order to continue to prosper changes in the workforce must be managed as any other resource would. In anticipation of the changing demographics, employers are also demanding that postsecondary institutions supply graduates who have an awareness of and competence in the area of cultural diversity (Anand, 2006). Due to changing demographics, postsecondary institutions are experiencing the pressures at both ends of the educational spectrum (Lazerson, Wagener, & Shumanis, 1999). The racial composition of the applicant pool of available students eligible for college admission is rapidly changing (Pike & Kuh, 2006). In order to maintain student populations at their current levels, efforts must be made to attract and sustain students from diverse backgrounds (Lazerson et al., 1999). At the other end of the postsecondary spectrum, employers have charged institutions of higher learning with the responsibility of developing graduates who can successfully function in a multicultural workplace (DeLeon, 1995). As institutions of higher education seek to identify best practices in diversity interaction as a component of a quality education, findings from this study can be used to refine the assessment of those practices.

Pope et al. (2009) posited that the theory base for multiculturalism is limited. The authors also suggested that existing theories fail to "explain the development of students of color and women" (p. 644) and that gender and cultural differences frequently went unaddressed. Despite the need for addressing the differences recommended by the researchers, the analysis of the NSSE data failed to support their recommendation and

suggested that in only limited activities should race and gender be identified and addressed as a characteristic unique to the characteristic of the participating cohort

The results of this study indicate that race had a statistically significant impact on student development in the area of diversity interaction. This study supports the research of Gurin et al. (2002) as well as that of Pike and Kuh (2006) that suggested while important, structural diversity alone does not encourage student interaction and does not increase student development in the area of cultural sensitivity. Pike and Kuh went on to further clarify that the strong relationship between structural diversity and informational interaction diversity support the likelihood that as the heterogeneity of the student body increased the diverse interactions among students. Milem et al. (2005) suggested that the vitality, stimulation and educational potential of an institution are directly related the composition of its constituency. Although structural diversity serves as the foundation of student development, it is the activity of interaction with peers of diverse backgrounds that fosters cultural awareness, knowledge and sensitivity (Chang et al., 2006).

In his study, Chatman (2008) determined that undergraduate students increased their understanding of other viewpoints through interactions of students and that of five areas of diversity; race was the most frequent topic. The results of the present study, viewed in context with Chatman's analysis, suggest that students experience a significant number of diversity interactions during the course of their tenure and that the quantity or quality of their interactions are most significantly affected by race and to a lesser degree by socioeconomic status and political belief. Milem et al. (2005) indicated that because it is easier for students to gravitate toward people of the same racial background, colleges and universities must create intentional institutional efforts to bring students together to

interact across racial and other diversity differences and provide stimulating academic opportunities for studying the historical, cultural, and social bases of diversity.

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Appendix A:

Instrument: National Survey of Student Engagement

Remove 1

Remove 2

Remove 3

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Appendix B:

Institutional Review Board Protocol Exemption Report

Remove 1

Appendix C:

Letter of Cooperation from Office of Strategic Research and Analysis

Remove 1

Remove 2

Appendix D:

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question One

Question One - Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing

Race	Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q1 –White									
	Female	2.76/.906	92	2.89/.880	218	2/95/.849	153	2.97/.905	233
	Male	2.64/.983	42	2.63/.901	78	2.85/.935	68	3.04/.882	96
Black									
	Female	2.83/.966	29	2.87/.950	52	2.93/.868	30	3.16/.757	56
	Male	3.25/.707	8	2.73/1.104	11	3.00/.000	4	3.00/.577	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Two

Question Two - Tutored or taught other students (paid or voluntary)

Race Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q2- –White								
Female	1.88/.982	92	2.05/.971	218	2.01/.973	153	2.00/.991	233
Male	1.98/1.000	42	1.90/.847	42	1.85/.919	68	2.06/.993	96
Black								
Female	1.93/.884	29	2.08/.882	52	1.70/.1.088	30	1.80/.1.119	56
Male	2.00/.926	8	2.00/.632	11	2.25/1.500	4	1.20/.488	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Three

Question Three - Had serious conversations with students of a different race or ethnicity than your own

Race Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q3- –White								
Female	2.63/1.035	92	2.75/.991	218	2.84 .897	153	2.70/.907	233
Male	2.69/.950	42	2.64/.897	78	2.88/.939	68	2.98/.984	96
Black								
Female	2.72/.1.066	29	2.87/.991	52	2.87/.900	30	3.02/.924	56
Male	3.13/.991	8	3.00/.894	11	3.25/1.500	4	3.43/.535	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Four

Question Four - Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values

Race Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q4- –White								
Female	2.58/.997	92	2.70/.973	218	2.81/.951	153	2.70/.902	233
Male	2.81/.943	42	2.72/.938	75	2.72/.895	68	2.96/.882	96
Black								
Female	2.62/1.083	29	2.73/.910	52	2.57/.774	30	2.89/1.003	56
Male	3.00/.926	8	2.73/1.009	11	2.75/.957	4	2.71/.488	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Five

Question Five - Examined the strengths and weaknesses of your own views on a topic or issue

Race Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q5- –White								
Female	2.54/.884	92	2.74/.926	218	2.75/.868	153	2.75/.840	233
Male	2.60/.989	42	2.81/.774	78	2.68/.921	68	2.89/.869	96
Black								
Female	2.93/.884	29	2.82/.783	52	2.60/.814	30	2.96/.914	56
Male	3.13/.835	8	2.82/.603	11	3.50/.577	4	3.20/.951	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Six

Question Six - Tried to better understand someone else's views by imagining how an issue looks from his or her perspective

Race Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q6 –White								
Female	2.72/.856	92	2.84/.855	218	2.86/.830	153	2.88/.775	233
Male	2.79/.842	42	2.78/.816	78	2.60/.866	68	2.97/.852	96
Black								
Female	3.00/.964	29	2.92/.788	52	2.90/.759	30	3.13/.810	56
Male	3.00/.926	8	2.82/.874	11	2.50/.577	4	3.29/.756	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Seven

Question Seven – Learned something that changed the way you understand an issue or concept

Race Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q7 –White								
Female	2.73/.813	92	2.90/.834	218	2.89/.832	153	2.87/.788	233
Male	2.71/.805	42	2.81/.823	78	2.75/.835	68	2.94/.856	96
Black								
Female	3.14/.833	29	2.98/.937	30	2.87/.937	30	3.27/.751	56
Male	3.00/.756	8	2.73/1.009	11	3.00/.690	4	2.86/.819	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Eight

Question Eight – Institutional emphasis: Encouraging contact among students from different economic, social, and racial or ethnic backgrounds

Race Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q8 –White								
Female	2.34/.929	92	2.40/.907	218	2.57/.907	153	2.59/.966	233
Male	2.38/.962	42	2.50/.922	78	2.63/.922	78	2.67/1.033	96
Black								
Female	2.24/1.123	29	2.46/1.038	52	2.37/1.038	30	2.80/1.034	56
Male	3.38/.744	8	2.82/.982	11	2.57/1.135	7	2.57/1.134	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Nine

Question Nine - Institutional emphasis: Providing the support you need to thrive socially

Race Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q9 –White								
Female	1.99/.920	92	2.17/.864	218	2.22/.926	153	2.32/.912	233
Male	2.02/.811	42	2.19/.790	78	2.28/.912	68	2.28/.926	96
Black								
Female	2.45/1.088	29	2.29/1.016	52	2.30/1.022	30	2.52/.972	56
Male	3.38/.744	8	2.35/1.120	11	2.75/.500	4	2.71/1.113	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Ten

Question Ten - Institutional contribution: Working effectively with others

Race Sex	Cohort 1 Mean Score/SD	n	Cohort 2 Mean Score/SD	n	Cohort 3 Mean Score/SD	n	Cohort 4 Mean Score/SD	n
Q10 –White								
Female	3.37/.822	92	3.31/.726	218	3.36/.722	153	3.41/.778	233
Male	2.93/.730	42	3.08/.864	78	3.32/.742	68	3.34/.765	96
Black								
Female	3.31/.850	29	3.37/.658	52	3.13/.819	30	3.54/.713	56
Male	3.63/.518	8	3.36/.674	11	3.00/.816	4	3.14/.900	7

Summary of MANOVA Results by Race and Gender on NSSE Responses 2005-2009 – Question Eleven

Question Eleven - Institutional contribution: Understanding people of other racial and ethnic backgrounds

Race Sex	**Cohort 1** Mean Score/SD	n	**Cohort 2** Mean Score/SD	n	**Cohort 3** Mean Score/SD	n	**Cohort 4** Mean Score/SD	n
Q11 –White								
Female	2.54/.999	92	2.59/.981	218	2.76/1.024	153	2.77/.940	233
Male	2.45/.942	42	2.50/1.003	78	2.66/.908	68	2.75/.995	96
Black								
Female	2.72/1.162	29	2.96/1.066	52	2.73/.980	30	3.18/.917	56
Male	3.25/.707	8	2.91/.831	11	2.75/.957	4	3.29/.951	7

Appendix E:

Summary of MANOVA Results on NSSE Responses 2005-2009

Summary of MANOVA Results on NSSE Responses 2005-2009

Pillai's Trace/Ind. Var.	F-value	Hypothesis	Error df	*p*-value df
Sex = .014	1.710	11	1285	.066
Race = .136	1.806	99.000	11637.000	.000
Cohort = .032	1.273	33.000	3861.000	.136
Sex/Race = .080	1.190	88.000	10336.000	.109
Sex/Grade = .023	.913	33.000	3861.000	.610
Race/Grade =.199	.956	275.000	14245.000	.690
Sex/Race/Grade = .134	.996	176.000	14245.000	.500