THE IMPACT OF RACE AND INTERACTIONS BETWEEN STUDENT-FACULTY ON UNDERGRADUATE STUDENT LEARNING AND MULTICULTURAL PERCEPTIONS

Yun Zhu
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THE IMPACT OF RACE AND INTERACTIONS BETWEEN STUDENT-FACULTY ON UNDERGRADUATE STUDENT LEARNING AND MULTICULTURAL PERCEPTIONS

A Study of Differences Between Asian/White Faculty and Asian/White Students at VCU

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

by

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Abstract

THE IMPACT OF RACE AND INTERACTIONS BETWEEN STUDENT-FACULTY ON UNDERGRADUATE STUDENT LEARNING AND MULTICULTURAL PERCEPTIONS

A Study of Differences Between Asian/White Faculty and Asian/White Students at VCU

By Yun Zhu, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2011

Major Director: Charol Shakeshaft, Ph.D.
Professor and Chair, Department of Educational Leadership
School of Education

As enrollment of minority students and recruitment of minority faculty in higher education increase, opportunities for students to interact with racially and ethnically different faculty will become more frequent and pronounced. Also, there may be expectations that these interactions will produce greater educational gains and sensitivity to racial issues. A quantitative research methodology was employed to measure the nature of the student-faculty interactions across race and to explore factors that influence undergraduate students’ GPA and multicultural perceptions in order to identify ways in which student-faculty interactions might better serve the students. Mainly, this study focused on the quantity, quality, and socialization of interactions.
between White and Asian students and faculty members. The instrument used for data collection was a combination of five national online surveys that were designed to assess college students’ perceptions and experiences of their student-faculty interactions and data were gathered with White and Asian faculty and students at Virginia Commonwealth University. Data collection consisted of surveying students and faculty members via email. The researcher found that only the quality of student-faculty interactions, which belongs to the quality of interactions, had a positive impact on students’ GPA (.06) and their multicultural perceptions (.18). A better understanding of factors influencing students’ GPA and multicultural perceptions would be beneficial for both teachers and undergraduate students at VCU.
CHAPTER 1. INTRODUCTION

History of Asian Americans in the United States

Asian Americans have been a special minority group in the United States because they have been the focus of both negative and positive stereotypes. Since the first influx of Chinese laborers immigrated to the gold mines of California in the late 1840s, negative stereotypes began and have persisted. Chinese immigrants were seen as “nothing more than starving masses, beasts of burden, depraved heathens and opium addicts” (Chang, 1991, p. 45). From the mid 1960s, Asian Americans have been labeled as a “model minority”—they are a successful and “problem free” minority group when compared with other minority groups. Not only do Asian Americans function well in American society, they are also high achievers in school (Chou & Feagin, 2008; Gudykunst, 2001; Hune & Chan, 1997; Inkelas, 2006; Li, 2009). Asian American families have a higher median annual income than American families in general, and the years of staying in school and the graduation rate are higher than the U.S. population as a whole (Bell, 1980, 1992, 1995; Herrnstein & Murray, 1994; Li & Beckett, 2006; Li, 2010; Li & Wang, 2008; Ramirez, 1986; U.S. Census Bureau, 2010).

In 1971, White students represented 90.9% of the first-time, full-time freshmen students in universities. The representation of Whites declined to 70.5% in 2006; hence, indicating proportional increases in the representation of other racial/ethnic groups in the U.S. population.
In 2006, 29.4% of all college enrollments consisted of minority students, which is an approximate increase of 20% compared to 30 years ago. Over the next two decades, minority student enrollments are expected to grow to nearly 40% of the overall U.S. college population (Aud et al., 2010). Like other minority groups, Asian Americans have experienced tremendous changes in American universities. Comprised of over 50 ethnicities, hundreds of different languages, and numerous religions, this group is expected to increase from 5.1% to 9.2% of the population by 2050. Considering the growth in numbers and diversity among Asian Americans, it is imperative that researchers conduct comprehensive empirical studies to address both Asian American students’ and faculty members’ experience in college.

Within all minority groups, Asian Americans are currently the fastest growing sector of the U.S. college population. They are extremely diverse, with tremendous variations in ethnicity, socioeconomic class, and immigration patterns (Chang, 2001, 2003). Most notably, Asian American students’ representation in U.S. postsecondary institutions has risen dramatically over the last two decades, more than doubling from 500,000 in 1990 to over 1 million in 2010. In comparison, the proportion of the enrollment for Whites during that same time period grew slowly, from nearly 10.7 million to 11.4 million (National Center for Education Statistics [NCES], 2010).

Likewise, statistics from NCES (2001, 2010) show that impressive progress has been made in increasing the numbers of minority faculty in higher education institutions even though the faculty population remains predominantly White. According to the National Study of Postsecondary Faculty report on faculty and instructional staff, the percentage of full-time minority faculty in degree-granting institutions has increased steadily to 20% of the total faculty population in 2010. The proportion of minority faculty increased from 9% in 1990, 15% in
1998, to 20% of the whole faculty population (NCES, 2001). Asian American faculty makes up 6% of all the faculty population, compared with 6.4% of the student body.

The dramatic increase of Asian Americans and other minority students and faculty has brought about significant diversity in American universities. Because of the changing composition of institutions, opportunities for students to interact with racially and ethnically different peers and faculty have become even more pronounced. In addition, literature suggests that these interactions will produce greater educational gains for students, and both faculty and students’ sensitivity to racial issues (Cole & Jackson, 2005; Hurtado, 2007; Hurtado & Carter, 1997; Hurtado, Engberg, Ponjuan, & Landreman, 2002). However, diversity has also brought about some side effects. How does a university manage student-faculty relationships based on the mixed population? What are ways to address the tensions and conflicts among different groups? Is it possible to fully address minority students’ needs?

**Problem Statement and Overarching Research Questions**

Needless to say, the existence of the diversified composition of students and faculty at universities serves as a foundation for cross-racial student-faculty interactions, experiences, and perceptions that foster students’ academic achievement and racial tolerance and acceptance. However, largely due to the legacy of institutionalized discrimination against African Americans, the main focus has been on the student-faculty interactions in higher education on the Black and White student-faculty relationship (Inkelas, 2006). As a result of the changing demographics of minority students and faculty, considerable research literature examining minority students’ college experiences emerged and took shape during the mid-1980s (Cole & Jackson, 2005). Some studies have begun to pay attention to other minority groups (e.g., Astin, 1993; Cabrera & Nora, 1994; Hurtado, 1992; Tinto, 1987, 1993). Before the 1990s, the
experiences of students from other racial and ethnic groups (that is, Asian, Latino/a, and Native American students) and their relationship with faculty had been mostly absent from research and literature in higher education. The results from these influential empirical studies have shown that the interracial relationships with faculty of students from other minority groups are different from those of White students. Unfortunately, the experiences of Asian American students in these studies have not been studied in-depth and they are discussed only in comparison to findings regarding other racial and ethnic groups. This omission has prompted several Asian American scholars, such as Chang, Denson, Sàenz, and Misa (2006), Hune and Chan (1997), Inkelas (2006), and Lee (2006, 2009) to advance that Asian Americans are the “invisible” population in American higher education. Therefore, in order to fill the relative absence of research on Asian Americans in higher education and strengthen their visibility in the discourse on race, this study seeks to focus on the experiences of Asian American students and Asian faculty.

The purpose of this study is to explain the relationship between faculty race, student race, and type of interactions—to address student interactions with professors whose ethnic and linguistic backgrounds are different from their own. Specifically, this research aims to examine the role of race/ethnicity in student-faculty interactions by comparing (a) the differences between Asian American students’ interactions with faculty and White students with faculty; and (b) the differences between Asian faculty interactions with students and White faculty with students.

Boutte (1999) and McGowan (2000) indicate that if both the students and professors are different in racial/ethnic backgrounds, they may encounter some level of discomfort, tension, and conflict. Penny and White (1998) found that in students and faculty who have the least amount of conflict, students will perform significantly better in courses where they have the same or
similar ethnic and cultural backgrounds as their instructors. Currently, because of the composition of students of different races/ethnicities, new problems related to race have emerged. For example, the failure of American universities to fully address minority students’ needs, which include academic needs and social needs, different racial situations are becoming causes for student dissatisfaction, and therefore impact the academic experience of both faculty and students (Pinheiro, 2001). By comparison, European students, because of their history, experience, language similarity to English, report experiencing different college life in American universities than students from Asia, Central/South America, and Africa (Poyrazli, Kavanaugh, Baker & Al-Timimi, 2004; Yeh & Inose, 2003). Non-European minority students, however, feel more discrimination, which, in turn, may lead to different college life experience. In particular, Asian students show greater preference for people of their own racial background; among all the other minority groups, Asians feel least comfortable in interacting with other racial groups (Smith, Bowman, & Hsu, 2006).

What are the specific student-faculty relationship experiences for Asian students and how do they differ from White students and other minorities? What are the interracial interactions between Asian students and faculty? Do student-faculty interactions have any effect on students’ academic achievements and academic and social experiences? Is there any possibility that one’s Asian identity will influence the relationship with their faculty/students?

**Rationale and Significance of the Study**

The majority of faculty members in the higher education profession are White, middle-class, monolingual-English speakers (Antonio, 2001a, 2002). This profile is radically different from the student profile. There has been a great demographic shift in the student population since 1980s (NCES, 2010). The makeup of faculty and students is quite diversified. Questions
have emerged such as how to help both faculty and students bridge the differences based on race? How does faculty treat students fairly who are different from their own races? How to truly engage minority students and boost their relationships with faculty in universities? These are all unsolved problems that need to be considered.

Despite these anticipated demographic shifts and gains in educational experiences, little research exists on how multicultural contexts of a university affect faculty and students (Antonio, 2001b). For instance, how does student-faculty race influence the student-faculty interactions? How do these interactions affect the development of student-faculty relationships? How do interracial interactions influence students' learning? What is the effect of student-faculty race on student satisfaction?

Altogether, the importance of this study is as follows. In previous study, in most cases race is a relatively fixed biological phenomenon. This study will challenge having race as a biological factor; in fact, race will be a vital factor instead of being a demographic attribute in this inquiry. Unfortunately in the United States, among the studies on student-faculty interactions across students’ race and ethnicity, most of the research either explores students’ race/ethnicity in terms of one group, which is called minority students, by using aggregated data and is compared with White students; or the discussion of race is generally framed in terms of Blacks and Whites. Only recently, research about college student-faculty interactions begin to sue disaggregated data; however, the studies have primarily focused on the educational experience of African-American and Latino students compared to White students, with little consideration of Asian Americans (Nakanishi, 1995; Teranishi, 2002a). Actually, Asian Americans have been misrepresented and are highly invisible in studies of higher education. A theme throughout the research on higher education discourse on race is that Asian Americans are
an understudied group (Hune & Chan, 1997). This study focused on the interaction of Asian American students with their faculty by comparing them with White students.

Another importance of this study is its attention to minority faculty. One argument for this research concerning the topic of interactions of student and faculty is that the focus of previous studies on student-faculty interactions has always been on the students. The perceptions and experiences of minority faculty are rarely found. Surprisingly, little of the research addresses the degree to which a faculty member’s race influences his or her experience in the relationship with different students. Another argument is that the published literature on minority faculty is narrowly focused on barriers, chilly climate, and adverse atmosphere (Antonio, 2001a; Cole, 2001; Stanley, 2006; Umbach, 2007). Positive factors that may affect minority faculty experience, teaching, and interactions have scarcely been discussed. Moreover, significantly more qualitative studies have been conducted on minority faculty than quantitative research. More empirical study on experience of minority faculty with their students is expected. These studies should also try to explore the patterns of student-faculty interactions from the faculty members’ perspectives. Previous studies, more often than not, only investigated understanding of student-faculty relationships from the students’ point of view.

The third contribution of this study is the choice of sample site. In most cases, previous studies either chose predominant White universities (PWU) or traditional Black schools (TBS) as sample sites. In this study, Virginia Commonwealth University (VCU) is a diversified university and its White students only account for 49%. Therefore, this study may shed additional light on the existing literature of student-faculty interactions under different environment.
Statement of Purpose

Findings from this study may help faculty members, scholars, practitioners, and policy makers better understand and serve this growing undergraduate population and illuminate their academic and social needs. Indeed, Asian American student enrollment at a range of postsecondary institutions in the United States has risen dramatically over the last two decades. Such educational enrollment figures underscore Asian American’s strong college-going trends and point to the significance of studying this group in higher education. Because the purpose of this study is to investigate the student-faculty interactions across student race and faculty race, it will compare the interactions of White/Asian American students and faculty or White/Asian American faculty with students. If a meaningful relationship or pattern can be found between White/Asian students and all faculty, all students and White/Asian faculty, this research can contribute to the existing literature on minority faculty and student experience in student-faculty interactions in higher education. Also, this study may heighten the awareness of minority issues among VCU administrators, faculty members, and students concerning student-faculty relationships.

Previous studies conducted on minority faculty have mainly emphasized minority faculty members’ negative, aversive experience. More importantly, investigating the nature of student-faculty interactions by taking the race of both faculty and students into consideration have not been explored. The answer to these questions will provide greater insight into racial differences in students and faculty for both White and Asian experiences, inside and outside of the classroom.

Overall, this study will help faculty and students (both Asian and White) become more aware of the quality of interactions they have with Asian and White students and the subsequent
impact on students' learning and the student-faculty relationships. The results of this study may provide insights related to the determinants of student-faculty interactions across student and faculty race/ethnicity and will reveal the dynamic processes that underlie contact between faculty and students on the basis of same race or different race. For universities, this research will facilitate institutions to shape their academic, interpersonal, cultural, and social offerings. Findings from this study may also encourage positive student-faculty interactions that can contribute to a student’s support network. The end result of this research may eventually help create a success-oriented environment for both students and faculty members.

**Operational Definitions**

The Asian American population is one of the fastest-growing racial groups in the United States and in higher education (Hune, 2002). As a racial category, it is not a fixed but fluid umbrella grouping, which has evolved over the past three decades out of “dynamic and complex negotiations between state interests, pan ethnic demands, and ethnic-specific challenges” (Espiritu & Omi, 2000, p. 43).

The census in the United States is based on self-report and self-identification. Critiques of racism, scientific arguments against the existence of race, and international prohibitions on state racial discrimination have been encountered as well as trend toward self-identification of racial status. Considering these facts, the focal point of this study is social race. Below are some census definitions, which may differ from the social definition of White, Asian Americans, and other racial groups within the same country. The social definition has also been added where possible.

*Race.* According to the definition from the U.S. Census Bureau and the Federal Office of Management and Budget, race in the U.S. Census, is a self-identification data item in which
residents choose the race or races with which they most closely identify and indicate whether or not they are of Hispanic or Latino/a origin (U.S. Census Bureau, 2003). However, race is a word, a concept that is full of ambiguity. Race is predominantly a social construct; in other words, scientists have discovered that only 2% of our genes are ultimately responsible for the visible differences such as skin color (“Race Relations,” n/d). Although it is not an exact science, social groups play a very important role in defining the rules of race. Omi and Winant (1994) have defined race as a social construction. They argue that racial formations in the United States are not fixed by the dominant order, but are constantly negotiated and contested between the racialized groups and the dominant order. White people do not usually think of themselves as having a race; race is a marker for “the other” (Landsman, 2001). When reference is made to a person, without further description, the social norm is White (and male and straight and not disabled). If more description is involved, such as “Latino worker,” “Black lawyer,” or “woman doctor,” it typically refers to the others. The assumptions embedded in the language enshrine Whiteness and White privilege. If someone is White, he/she needs no further description. For minorities it is part skin color, part privilege, and part social construction. In summary, race in this study is concentrated on social and cultural characteristics but not biological or genetic categories in reference.

*Ethnicity.* Ethnicity in this study means a group of people whose members share a common heritage, and often consisting of a common language, a common culture.

*Asian American.* In the late 1960s, people of Asian descent in the United States, prompted by the social movement in the country at that period, began to identify themselves as Asian Americans because they objected to being called “Orientals” by the mainstream culture. This category has become widely adopted, for example, by the U.S government as a census
classification (Nomura & Hune, 2003), and by higher education for data collection and for the allocation of programs and services (Hune & Chan, 1997). The term Asian American originated during the social reform efforts in the late 1960s to put an end to racial discrimination. College activists from various Asian ethnicities adopted it as a wide and pan ethnic identity to acknowledge their fair treatment as minority group members and as a strategy to form political coalitions for equity and empowerment (Wei, 1993). In the 1970s, the U.S. Census Bureau sought to collect data on ethnic groups that government officials deemed similar and created the Asian or Pacific Islander (API) category. However, because of the opposition to this action by Asian and Pacific groups for the loss of their distinctiveness, the Census Bureau kept separate statistics gathering on ethnic-specific groups in conjunction with a summary API category. Because they disagreed with it, and also in order to better meet their self-definition and interests, at different times various ethnic-specific Asian groups, including Asian Indians, Filipinos, and Native Hawaiians, have sought inclusion in or exclusion from the API category. Undoubtedly, such efforts to dispute the expansion of this racial category will continuously underscore the complexity of narrowing and categorizing the Asian American population (Espiritu & Omi, 2000). Nonetheless, Asian American (or Asian Pacific American or Asian and Pacific Islander) is now a term in common use in institutional data and U.S. society. Most importantly, it has come to represent numerous groupings as if they are a single coherent category.

In this study, the term Asian American included Pacific Islanders. I acknowledged the limited utility of Asian American as a fixed umbrella category in research and policy making. However, the data in this study could not be disaggregated by specific ethnic subgroups, and it was unclear whether Pacific Islander students identified themselves as Asian/Asian American in the survey. Thus, the term Asian American was used to describe this student population.
**White.** Official definitions of White have changed over the years such as those used by the U.S. Census. The term is used in relationship to skin color and culture, respectively. The U.S. Census proposes to reflect the social definition of race, however, the social dimensions of race are more complex than census criteria.

The 2003 U.S. Census definition (U.S. Census Bureau, 2003) includes White "people having origins in any of the original peoples of Europe, the Middle East or North Africa.” According to the definition of the U.S. Census, White refers to a person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race(s) as “White” or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian (U.S. Census, 2010).

In this study the meaning of White includes census definitions. At the same time, the social definition has also been added which implies power, privilege, and social status.

**African American/Black American.** The terms are used to categorize people who identify with African racial/ethnic groups. African Americans or Black Americans are citizens or residents of the United States who have origins in any of the Black racial groups of Africa (McKinnon, 2007).

**Latino/a.** The term Latino/a was officially adopted in 1997 by the U.S. Government in the ethnonym, Hispanic or Latino/a, which replaced the term Hispanic (Office of Management and Budget, 1997). The United States official use of the term Hispanic has its origins in the 1970 census.

**Native American.** Native Americans in the United States are the native peoples who account for a large number of different tribes, states, and ethnic groups. There are a significant number of terms used, some of which are very controversial. The native peoples are known as
American Indians, Indians, Amerindians, Amerinds, or Indigenous, Aboriginal, Original Americans, or Red men (Office of the Secretary, 1995).

Summary

Among the minority groups, Asian Americans are the fastest growing sector. The images and identities of Asian Americans in American history and contemporary life are rapidly changing—from highly underrepresented to representation of model minority. The demographic number of minority student enrollment and minority faculty members is increasing, which also increases the representation of Asian Americans in American higher education. When populations differ, separate analyses are needed accordingly. In this situation, more studies are needed concerning Asian Americans in higher education.

Further study in the future can examine differences and similarities within Asian groups, exploring differences instead of aggregating Asian groups into one category that will mask important features among ethnicities in one Asian category. Because the interactions involve both students and faculty, future studies need to conceive of student-faculty interactions as two parts of a broader strategy instead of separating students and faculty into two broken parts.
CHAPTER 2. REVIEW OF THE LITERATURE

Conceptual Framework

The main purpose of this study is to investigate the role of race in both the quality and quantity of student-faculty interactions in higher education and the impact on students’ academic achievements and multicultural perceptions. The framework for inquiry is guided by Tinto’s interactional model of student persistence and departure (1975, 1987, 1993). This model was most frequently used to support the foundations for examining student-faculty interactions and the resultant impact on students' educational gains (Anaya & Cole, 2001; Cole, 1999; Endo & Harpel, 1982; Pascarella & Terenzini, 1983; Pascarella, Terenzini, & Hibell, 1978; Wilson, Woods, & Gaff, 1974). According to Tinto (1975, 1987, 1993), when students are more academically and socially integrated into college, they are more likely to persist in their studies; and therefore, they are more likely to successfully complete their degrees.

Tinto’s interactional theory explains three stages that students experience in college. The first stage is Separation, which means students must separate from the community/group with which they have been formerly associated, such as their high school peers and teachers, their neighbors, and their family. The second stage is called “Transition.” After entry into a university, students begin to interact in new ways with people from new groups. The last stage is “Incorporation.” Students begin to adopt the normative values and behaviors of the new groups or college.
Tinto conceptualizes attrition of students due to lack of social integration as a voluntary, individual decision and dismissal on academic grounds as an institutional decision. Students who feel socially integrated, which include interactions with faculty as well as their peers, are likely to perceive their coursework more positively and earn higher grades than students who are less socially engaged (Mayo, Murguia, & Padilla, 1995). Likewise, students who were socially isolated with fewer interactions with faculty and other students are more likely to persist at lower rate and leave college early (Pascarella & Terenzini, 2005; Tinto, 1993). Nevertheless, Tinto’s theory indicates that attending a college does not pose special disadvantages for students who do not have enough social and academic integration. Tinto (1987) also suggests that personal interactions with other members within the academic community, including teachers, are an essential factor in fostering student identification and engagement.

Perhaps because Tinto’s theory of college student attrition is one of the most cited, researched, referenced and validated theories for understanding students’ college experience (Cole, 1997, 2001, 2005, 2009, 2010; Pascarella & Terenzini, 2005), a body of literature exists that has critiqued Tinto’s (1993) model. Many of these criticisms have argued that Tinto’s theory should be revised to more accurately account for minority students’ cultural backgrounds, characteristics and the need to retain the relationships with their previous connections, which include their minority communities (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; Guiffrida, 2006; Hurtado & Carter, 1997; Tierney, 1992). For example, Nora (2002) criticizes that assumptions of methodology and explanations must be reconsidered if students from different racial/ethnic groups want to integrate into the campus environment (Hurtado & Carter, 1997; Nora, 2002). Tinto, however, does recognize the need for minority students. He emphasizes minority students’ connecting with students with a shared culture or with the same
language and he asserts that the cultural connections functioned primarily to facilitate the students’ social integration into college. Somewhat linked to Tinto’s theory is the research of Hurtado and Carter (1997), who differentiate students’ integration from students' social participation, thinking that these two are conceptually different. They contend that social participation does not assume that minority students must acculturate to the mainstream norms of predominantly White institutions.

According to Kuh and Love (2000), integration implies that students must become socialized into the dominant culture of the institution while abandoning their former culture. Despite the critical assertions that this conception of integration amounts to little more than minority students' cultural assimilation, Nora (2002) contends that social integration is a theoretically appropriate concept regardless of students' racial and ethnic group.

Although there is some criticism about Tinto’s theory, most agree that for students to succeed in college, they must learn to interpret, explain, and negotiate foreign environments and interact effectively with peers and faculty members (Kuh & Love, 2000). In this case, interpersonal relationships, especially relationships with faculty both on and off campus, play a very important role in mediating and facilitating student success in college. At the same time, Tinto’s model also indicates that other elements need to be considered when studying various aspects of students’ academic success and perceptions. These factors include institutional characteristics (e.g., different types of institutions, institution size), field of study, financial aid, place of residence, parents’ education, income, and occupation, and students’ age, previous academic achievement represented by home life, students’ previous life and college. All of these factors affect student’s educational progress (Astin, 1984; Kuh, 2007; Tinto, 1993, Tinto & Love, 1995).
Brief History of Asian Americans

According to Suzuki (2002), space, time, and social class moderate the experience of being a member of a minority group and the consequent norms, values, competencies, practices, and subjectivities that derive from that experience. History for certain minority groups and racial experiences will definitely shape minority people’s experiences and life in the United States. It is necessary to investigate how racial stereotypes impact the lives of Asian Americans.

Similar to other racial and ethnic minority groups, historically Asian Americans have been the target of stereotyping (Suzuki, 2002; Yu, 2006). As early as the beginning of the last century, Du Bois (1903) coined the term “double consciousness” to describe the sense of always looking at one’s self through the eyes of others. The prejudicial stereotypes resulted in acts of discrimination and violence and led to the 1882 Chinese Exclusion Act, which outlawed the immigration of Chinese laborers into America. The discrimination was not limited to the Chinese. They also were directed to other Asian ethnic groups such as Japanese, Filipinos, and Indians (Min, 1995; Takaki, 1989). In public discourse from the late 1800s to the 1940s, Asians were generally portrayed as “yellow peril, depraved, uncivilized, and threatening to the American way of life” (Yu, 2006, p. 326). Fair and just portrayals and descriptions of Asians were almost invisible and Asian immigrants’ huge contributions to America were unexplored and unacknowledged.

In the early 1960s, Asian Americans were still portrayed negatively in the United States as obsequious, slavish, and subservient or as treacherous, deceitful, and untrustworthy (Suzuki, 2002). Even though by then many Asian Americans were third- or fourth-generation Americans, they still were viewed, more often than not, as foreigners, not as full-fledged Americans.
Because the socioeconomic status of Asian Americans has continued to rise since the 1960s (Suzuki, 2002), a different narrative about Asian Americans has emerged and has become popular in American media (Peterson, 1966; “Success Story,”1966). The recent phenomenon of Asian American students’ success in schools is very much a result of the large influx of late 1960s immigrants from Asia, and the 1975 first wave of refugees from Southeast Asia, who were mainly middle class and received education in their home countries. The large influx of Asian immigrants and refugees has been one of the main factors that have increased visibility of Asian Americans across the United States. Generally speaking, those who have been very successful academically are the offspring of these immigrants and refugees (Fong, 2007). According to the United States Census report (2010), Educational Attainment in the United States, over 50% of foreign-born people from Asia have college degrees, compared to 27.2% of all U.S. foreign-born. This sentiment is consistent with the result of another national survey conducted among 25,000 eighth grade minority students in America (Kao & Tienda, 1995). The study found that Asian, African American, and Latino/a students with immigrant parents outperform other racial minority students whose parents were born in the United States. Among these students, first and second generation Asian American students had the highest achievement levels when compared to third-generation Asian American students. The first and second-generation Asian American eighth grade students tend to have higher grade point averages (GPAs), and score about five points higher on standardized reading and math tests than their third-generation Asian American peers.

Since the 1980s, there are new studies that describe Asian Americans as extraordinarily successful and as a minority group that is immune from problems (Bell, 1985; Herrnstein & Murray, 1994; Ramirez, 1986). This literature suggests that Asian Americans function well in
American society, being somehow free from cultural conflict and discrimination while experiencing few adjustment difficulties. These perceived superb character traits and behaviors from Asian American students are linked to the perception that Asian Americans have overcome disadvantages and attained more upward social mobility compared to members of other racial minority groups. By aggregating data on all of the Asian Americans, researchers have shown that Asian Americans, as a combined group, appear to be doing relatively well in comparison with other groups. For example, they found Asian American families have a higher median annual income than U.S. families in general and that the median number of years of schooling completed by Asian Americans was higher than the U. S. population as a whole (Suzuki, 2002; U.S. Census, 2010). All of these became the basis for the “model minority” concept.

However, subsequent studies have demonstrated that when the socioeconomic data on Asian Americans were disaggregated and more thorough and sophisticated analyses conducted, a very different picture emerged (Chun, 1995; Suzuki, 2002). Such analyses showed that the annual per capita income of Asian Americans was considerably less than their White counterparts who had the same level of education, and the disparity was even greater when level of education and geographical area of residence were consistent (Lawler, 2000). The proportion of Asian Americans living below the poverty line was considerably higher than that of the White population. In summary, Asian Americans are still struggling to achieve income parity with their White counterparts. Whites consistently gain a substantially higher return on education than any of the Asian Americans groups (Suzuki, 2002; Takagi, 2002).

As such, it is impossible to allow either negative stereotypes or the model minority image to color people’s view of Asian Americans. We need to see the real picture of Asian Americans in the United States.
In this study, race will be a vital factor instead of being a demographic attribute. The presumptions that race is a relatively fixed biological phenomenon and that social inequalities experienced by minorities are greatly determined by biological factors are challenged. It is necessary not to regard race as only a biological category. Based on the history of Asian Americans in the United States, it is not difficult to see that race, in fact, is continuously and constantly changing and race is a socially constructed phenomenon. Asian American expert, Shirley Hune, defines race relations as extremely dynamic and continually being redefined. Race relations are a combination of both micro levels, such as discourse and meaning, and macro levels, such as social institutions, policies, and administration, of conflict and cooperation (Hune, 2002; Hune & Chan, 1997). These definitions and perceptions help us understand why in history and now, Asian Americans have experienced periods of intense hostility, as well as other periods of relatively calm race relationships. Instead, in this inquiry, race will be categorized as a social group united by a long history of discriminatory experiences in the United States.

In summary, history has indicated that inequality, lack of opportunity, and oppression, are historical artifacts that are not easily remedied by ignoring race that unavoidably casts a shadow on the life of Asians and their experience in the United States. The historical legacy of inclusion and exclusion of Asians may influence their life and learning in higher education and ultimately influence their relationships with faculty.

**Diverse Environment and the Dynamics of Student-Faculty Interactions**

The diverse environment will shape the experiences of students and have positive effect on student learning (Lundberg, 2011), foster student involvement (Anaya & Cole, 2001; Cole, 1999; Endo & Harpel, 1982; Pascarella & Terenzini, 1983, 1991, 2005; Rendón, Jalomo, & Nora, 2000; Wilson et al., 1974), and better prepare students in a democratic society (Anaya &

In the diverse environment, minority students and faculty may feel different than White students and faculty. Lundberg (2010) thinks the power and dynamic differences between students and faculty can trigger an imbalance of institutional power along racial/ethnic lines. Lundberg and Schreiner (2004) suggest that the effects of student-faculty interaction on student outcomes may differ by student race. For example, they found that both African American and Native American students’ interactions had little significant impact on their grade point average and they received fewer benefits from student-faculty interaction. Einarson and Clarkberg (2010) found that African American and Latino/a students had comparatively higher levels of out-of-class engagement with faculty than White and Asian American students. Cultural diversity at university helps students and professors to retain their own cultural and ethnic identity, take pride in their own cultural heritage, and, at the same time foster the appreciation of diversity among the whole university community (Lee & Janda, 2006).

**Student-Faculty Interactions**

Over the decades, there has been voluminous research concerning best practices for higher education students. Certain institutional practices are known to lead to higher levels of student engagement (Astin, 1991; Chickering & Reisser, 1993; Kuh, Schuh, Whitt & Associates, 1991; Pascarella & Terenzini, 1991). Among those, the best known set of engagement indicators is Chickering and Gamson’s (1987), "Seven Principles for Good Practice in Undergraduate Education." Among the seven principles, student-faculty contact is one of the top factors.

Student-faculty interaction is an essential component of the collegiate experience (Astin, 1991; Chickering & Reisser, 1993; Pascarella & Terenzini, 1991). A number of empirical
studies have provided extensive evidence identifying different predictors (i.e., student and institution characteristics) of student-faculty interactions and the influence on students' educational gains (Anaya & Cole, 2001; Cole, 2007; Cole & Jackson, 2005; Cox & Orehovec, 2007; Kuh & Hu, 2001; Pascarella, 2001; Pascarella & Terenzini, 1983, 1991, 2005). In their meta-analyses of the higher education literature, Pascarella and Terenzini (1991, 2005) identify a number of studies (Hu & Kuh, 2003; Hurtado, Engberg, Ponjuan, & Landreman, 2002; Kuh & Hu, 2001) that support a correlation between faculty-student interactions and positive student outcomes. Furthermore, research suggests that informal interactions with faculty outside the classroom may lead to enhanced intellectual development and therefore affect student persistence (Tinto, 1993).

Actually, considerable examples from research illustrate the satisfactory effects of student-faculty interactions. In Findings From the 2005 Administration of Your First College Year (YFCY) National Aggregates, Hurtado et al. (2007) indicated that during the first year, on the whole, 78.7% of student respondents felt “fairly successful” or “completely successful” in getting to know the faculty. In the College Senior Survey in 2006, which was administered through the Cooperative Institutional Research Program (CIRP) to over 30,000 college students at 118 four-year institutions, students reported that the time they spent with faculty resulted in generally positive outcomes (Hurtado et al., 2007). Twenty-four percent of students reported that their professors “frequently” provided them with an opportunity to partner on research projects, such as collaboration on a research paper. A similar proportion of students said professors provided students with both mental and emotional support and encouragement. More extensive interactions with faculty, therefore, would appear to present students with opportunities to enhance their academic experience and engagement (Saenz & Barrera, 2007).
Several other factors have been reported to impact student-faculty relationships. Compared to students at comprehensive colleges and universities, students at research universities (classified by the Carnegie Foundation for the Advancement of Teaching, 2011) reported the fewest interactions with faculty members, while general liberal arts college students reported the most out-of-class contact with faculty (Boyer Commission, 1998; Kuh, Vesper, Connolly, & Pace, 1997). Students in private institutions reported more out-of-class contact with faculty than students in public institutions. Even though there is much discussion concerning student-faculty interactions among different kinds of universities, institutional selectivity did not significantly influence student-faculty interactions (Kuh & Hu, 2001).

Years in school also make a difference in the frequency and nature of student-faculty interactions as far as the forms and content of interactions are concerned. As students moved through the 4 years of university, career-related interactions and out-of-class contact increased. However, using first-year students as the comparison group, the further along students were in their studies, the less contact they had with faculty regarding how to improve their writing with faculty members (Kuh & Hu, 2001; Pascarella & Terenzini, 2005).

Apart from the previously mentioned factors that influence the student-faculty relationship, some psychological aspects also play a role in shaping student-faculty interactions. Students' contact and exposure to "caring" teachers is a significant factor in student retention (McArthur, 2005). The influential review of the literature by Pascarella et al. (1978) on student-faculty contact reported that student characteristics such as having similar interests and aspirations as faculty, and seeking faculty mentorship were important antecedents for determining the frequency and quality of student contact with faculty.
Other student and institutional characteristics such as gender (Astin, 1993; Cole & Jackson, 2005; Pascarella & Terenzini, 1991), college major (Cole & Jackson, 2005), high school GPA and degree aspirations (Anaya & Cole, 2001; Pascarella & Chapman, 1983; Cole & Jackson, 2005; Pascarella et al., 1978), parental education (Pascarella & Terenzini, 1991), living on campus (Cole & Jackson, 2005), institutional size and institutional type (Kuh & Hu, 2001) have also been significantly related to student-faculty interactions. Kuh, Douglas, Lund, and Ramin-Gyurnek (1994) contend that in order to improve students’ personal development, career planning, and student persistence at school, every college or university needs to encourage an increase in faculty-student interactions.

Based on the literature, one can conclude that students can benefit from their interactions with faculty. Nevertheless, even though students report that the time they spend with faculty results in generally positive outcomes (Hurtado et al., 2007), the quality and quantity of student-faculty interactions was reported as unsatisfactory, compared to the time they spent with their peers. The great majority of students (92.6%) met with faculty outside of class only 2 hours or less per week, and it is apparent that students were not interacting with faculty on a regular basis; and regular (at least on weekly basis) contact with faculty, academic advisors, teaching assistants, or counselors, and/or other college personnel was uncommon.

At the same time, the quality of student-faculty interactions is questionable. The findings from the study by Hurtado et al. (2007) indicate that, 28.4% of students “frequently” or “occasionally” felt intimidated by their professors; and only 20.8% of the survey respondents frequently or occasionally worked on a professor’s research project during their first college year. Comparatively speaking, these students spent quite a lot of time with their friends—nearly 80% interacted daily with their friends on campus. Likewise, 77.8% of students claimed that
they socialized with their friends more than 6 hours per week. The data collected related to peer interactions posed a sharp contrast with the frequency of interactions between students and faculty (Hurtado et al., 2007)

While the positive efforts performed by student-faculty interactions associated with student achievement, career choice, and GPA are well-documented and widely explored, little is known about how various student/faculty subgroups experience student-faculty interactions. Questions include what is the effect of student-faculty relationships on students with different racial/ethnic backgrounds? What is the experience of faculty with different races/ethnicities? Previous literature on student-faculty relationships relate to race only and treat race as if it is an individual attribute that is stable across time. Race is not, however, a biological category that can be reduced to an individual trait. Actually it is a social group that is related to culture, politics, economy, and history. The meaning and effect of race needs to be articulated differentially across space, time, and reference groups. The literature about student-faculty interactions has limitations on tendencies toward simplifying the term race, and not being culture-specific and race/ethnicity-specific toward analysis of both students and faculty members’ educational experiences.

Among the body of literature that examines student-faculty interactions (Hurtado, Milem, Clayton-Pederson, & Allen, 1999; Nora & Cabrera, 1996), there are only a handful of studies that explore how faculty of various backgrounds work with students whose backgrounds differ from themselves, and the interracial relationship between faculty and students. For example, Rubin and Smith (1990) find teachers’ ethnicity and choice of topic are more important determinants of undergraduates’ attitudes than accentedness; Hendrix (1998a) points out that African American faculty is challenged more often than White faculty concerning teaching
credentials and class authority. McCalman (2007) indicates that domestic teachers are perceived as more effective than international instructors, and there is less positive effect on students to courses taught by international teachers. In a study of one university, DiPietro and Faye (2005) found that Hispanic faculty received the lowest course evaluation ratings. Comparatively, Asian-American faculty received slightly better course evaluations than their Hispanic colleagues, but their scores were, on average, still worse than the scores of White faculty.

Among these few research studies, only one empirical study (Rubin, 1998) concentrated exclusively on experiences of Asian faculty with their students. Rubin showed that White students rated Asian faculty less creditable and less intelligible than their European-American faculty.

**Student-Faculty Interactions Across Race in Higher Education**

**In-Groups vs. Out-groups**

Sumner (1906) developed the concepts of the in-group the out-group. He characterized relations within the in-group as cohesive and relations between the in-group and the out-group as hostile.

McCallion (2007) defines in-group as a social unit that an individual belongs to, interacts with, and shares a sense of “we-ness” with. An out-group, is also a social unit or group of people that an individual neither belongs to nor identifies with. Here in this study, both in-group and out-group are socially constructed versions that through physical markers such as skin color and ethnicity, and symbolic markers such as traditions, narratives, creeds, rituals, and social practices. In-group identity, according to Hadden and Lester (1978), is an ongoing achievement in which group boundaries are collectively generated, maintained, and employed to mark differences between insiders and outsiders. In the current study, in-group means White students
and White faculty members, and out-group, comparatively, means Asian students and Asian faculty members.

According to Sumner (1906), hostility is related to ethnocentrism and man’s tendency for assessing the environment through the priorities of his social/ethnic group cultural notions. In 1979, Tajfel and Turner introduced the term, “social identity,” by using the comparison of in-group and out-group. They summarized the main concept of social identity by differentiating in-group and out-group and the intergroup relationship. Tajfel and Turner (1979) and Tajfel (1981, 2010) concluded that the interactions among different groups can result in in-group bias and out-group discrimination. Sumner (1906) maintained that humans are a species that join together in groups by their very nature. Moreover, humans have an innate tendency to favor their own group over others.

According to Burgoon’s (1986) Expectancy Violation Theory, people have a general tendency to favor his/her in-group. Giannakakis and Fritsche (2011) think that out-group members are more likely to be discriminated against than in-group members, due to favoritism displayed towards in-group members. Based on these studies, we can assume that in the relationship of student and faculty, minority students may prefer more faculty members from same race/ethnicity.

Minority Students’ Different Expectations for Faculty

Because different minority groups have varying history, cultures, values, and social backgrounds, the experiences of students from the various races/ethnicities will differ. For example, European students in the United States report different experience in college compared to students from Asia, Central/South America, and Africa (Poyrazli et al., 2004; Yeh & Inose, 2003). The surveys, National Survey of Student Engagement and Community College Survey of
Student Engagement studies show that, in general, students from different racial and ethnic backgrounds appear to engage in effective educational practices at comparable levels (Kuh, 2007; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007). In the study of the overall satisfaction of college seniors in the United States, Einarson and Matier (2005) identified Latinos/as and Whites as the two groups most satisfied with their college experience. However, Asian American and African American students report significantly lower overall satisfaction with university life than their White and Latino/a counterparts. This result is consistent with 2005 NSSE studies. More important, African-Americans report more active and collaborative learning activities with faculty; Asian Americans are the least engaged in this area (Huh & Ku, 2003).

Owing to minority students’ different backgrounds, they may have different experiences, and most likely, students with different races will have different expectations toward their faculty compared with the White students. Studies show that students from different races/ethnicities will have different expectations, acceptance, and feedback toward their faculty members (Hurtado et al., 1999; Huh & Ku, 2003). These discrepancies may lead to their different experiences with faculty. Consequently these different interactions will have various effects on students’ academic achievements and multicultural perceptions. Noel and Smith (1996), and Zhang (2001) found that among White, African-American, and Hispanic American students, all groups preferred to disclose more information to faculty members of their own race or ethnicity. This relationship is strongest for African-American and Hispanic American students, particularly regarding topics of a racial, academic, or sensitive nature. In a study of Latina/o students, Anaya and Cole (2001) point out that frequency and quality of relationships with faculty had a positive effect on grade point average. Likewise, Hernandez (2000) argues that retention increases when faculty pay attention to Latino/a students as individuals and care for their well-being. Tierney
(1995) states that Native American students need to form a relationship with at least one instructor per term by attending office hours. Jackson, Smith, and Hill (2003) contend that successful Native American college students admit that one of the essential elements facilitating their retention at universities is the identification of a perception of welcoming faculty and staff. This makes Native American students feel someone cares about them. They agree that establishing a trusting and reliable relationship with a faculty or staff member has a positive effect on Native American adjustment (Wolf & Melnick, 1990) and persistence (Swisher, Hoisch & Pavel, 1991).

Eimers (2001) indicates that as the levels of satisfaction with faculty interactions increase, the level of progress across the four major domains of scientific reasoning, career development, intellectual development, and problem solving also increase for all students accordingly, but the intellectual and problem-solving gains are significantly greater for minority students than for White students. In this study, Eimers also finds that, compared with White students, among all the minority students, Asian American students reported less frequent career-related interactions with faculty.

**Racism and Discrimination Experienced by Minority Students**

Even though American society is trying to eliminate the shadow of race on its people, in a short run, race will continue to pose a problem in this society. Race shapes opportunities and both academic and social experiences of people involved in U.S. society and universities. It is one of the salient elements among students in higher education.

Solorzano, Ceja, and Yosso (2000) and Solorzano, Allen, and Carroll (2002) used the term “racial microagressions” to describe the everyday racialized incidents that students encounter at university and that influence and impede their feelings of acceptance, satisfaction,
and integration into academe. For example, Ancis, Sedlacek, and Mohr (2000) point out that African-American students consistently report facing more racial antipathy, less fair treatment by faculty, staff, and administrators. They generally face greater pressure to conform to stereotypes than their peers experienced. Research also has suggested that low expectations by teachers are a form of discrimination that African-American and Latino/a students encounter on a regular basis (Felice, 1981; Grant, 1984; Ladson-Billings, 1999, 2001, 2005; Ladson-Billings & Tate, 1995; Lipman, 1998; Yoshino, 1961). Cabrera and Nora (1994) conclude that minority students, compared to their White counterparts, are more sensitive to racial issues and hold more nuanced conceptions and perceptions of discrimination.

For minority students, racism or feelings of racial tension and discrimination can sometimes impede, or create a barrier when interacting with faculty, which consequently, influences the nature (quantity and quality) of their educational experience (Allen, 1992; Davis, 1991; Hurtado, 1994). For example, in Guiffrida’s (2006) study of African American students at a predominantly white institute (PWI), she finds that African American students often perceive White faculty as culturally insensitive and unapproachable in three ways: stereotyped comments from White faculty, insensitivity to African American culture, and their generalization of students’ opinions as representing those of all African Americans. However, these students in the PWI perceived African American faculty more approaching because Black faculty is more likely to incorporate black culture, history, and ideas into their curricula; they are role models to Black students; and Black faculty are less likely to stereotype Black students by race. In the end, Guiffrida’s (2006) study concludes that Black students show the strongest positive correlation between frequency of out-of-class contact with faculty and GPA. In an interview of minority
students, Cole (2007) noted that 60% minority students felt faculty less willing to interact with them, thus they were less enthusiastic about interacting with faculty as well.

Currently, universities in the United States are witnessing the benefits of diverse student and faculty bodies. It is indispensable for assuring the quality and quantity of student-faculty interactions that ultimately have impact in student’s life at school. As such, distinguishing students' racial and ethnic backgrounds has become empirically evident and significantly necessary in understanding student-faculty relationships and the subsequent impact on students' educational experience. There continues to be a lack of empirical research, related to the most basic questions with regard to the experience of minority students in multicultural contexts, and interracial experience with faculty.

However, the increasing diverse composition of faculty and students bring many other perspectives to higher education. First of all, critics of the university, point to reports of increasingly tense racial climates on campus and racial self-segregation among students. Second, incidents of ethnic and racial discrimination are still prevalent in American universities (Chang, 2000; Gose, 2008; Pettigrew, 1998). Many campuses are struggling with racial tensions among students from diverse race groups. African-American students, in particular, are more likely than Whites to be the target of some forms of direct, personal racism (Ancis et al., 2000; Banerji, 2005; Fisher & Hartmann, 1995; Gossett, Cuyjet, & Cockriel, 1998; Harper & Hurtado, 2007). These types of incidents include differential and inequitable treatment and stereotyping by peers, faculty members, campus police, teaching assistants, administrators, and staff. For example, African-American students have perceived more interracial tensions on campus, have reported significantly less satisfaction with the institution, and have also reported that faculty
members often assess their academic performance more negatively than they do for White students (Ancis, et al., 2000; Coleman, Jussim, & Isaac, 1991).

**Different Treatments from Teachers to Minority Students**

In a meta-analysis, Tenenbaum and Ruck (2007) examined whether teachers’ expectations, referrals, positive and neutral speech, and negative speech differed toward ethnic minority students as compared with White students. This study showed that (a) teachers favored White students compared with African-American and Latino/a students, and (b) teachers were reported to hold the highest expectations for Asian American students. In addition, teachers hold more positive expectations for White students than for Latino/a or African-American students and made more positive referrals and fewer negative referrals for White students than for Latino/a and African-American students. Additionally, teachers have directed more positive and neutral speech toward White students than toward Latino/a and African-American students. Researchers found some evidence on teachers’ treatment toward minority students, especially to African-American students. Finally this meta-analysis concluded that African-American students are given less attention, ignored more, praised less, and reprimanded more than their White counterparts by White-American teachers in integrated classes. This result is consistent with other studies (Casteel, 1998; Chang & Sue, 2003; Dee, 2004; Ferguson, 2003; Tenenbaum & Ruck, 2007; Zhang, 2001).

The meta-analysis outcomes may lead to two kinds of discrimination: for African American and Latino/s students, teachers hold low expectations for them, which may lead to low self-efficacy, low academic motivation, and less student-teacher interactions on academic issues. For Asian American students, teachers’ high expectations can lead to opposing results: on one hand, it can be used as a strong motivator for Asian students to work hard as their teachers
expect; on the other hand, because teachers hold Asian American students as exemplars of the American dream of model minority, it may easily result in another type of stereotype that teachers have presupposition that (a) all the Asian American students are academically successful, (b) they are supposed to be good and are immune from academic problems, and (c) they over-generalize that their Asian students need to represent their Asian group. These different attitudes and expectations from teachers toward different groups of students will have impact on student-teacher interactions. Though this meta-analysis is referring specifically to K-12 teachers, results from the literature may possibly apply to higher education as well.

A variety of treatments to different students are not uncommon in higher education. Recent work suggests that African-American and Latino/a adolescents often perceive race-based differential teacher treatment (Brown, 2006; Fisher, Wallace, & Fenton, 2000; Rosenbloom & Way, 2004). In terms of differences between groups, African-American adolescents report higher levels of discriminatory treatment than their Asian American counterparts (Greene, Way, & Pahl, 2006). Latino/a adolescents reported lower levels of perceived differential treatment by teachers than Asian American students (Greene et al., 2006). On the whole, minority students experience more pressure to conform to a racial stereotype while White students report significantly fairer treatment by faculty and less racial tension (Ancis et al., 2000).

**Minority Faculty Members’ Interactions with Students in Higher Education**

Voluminous research exists on the experiences of minority faculty in university settings. However, the theoretical framework implicit in the published literature on minority faculty, unfortunately, narrowly focuses on barriers, chilly climate, and adverse outcomes that they might encounter (Antonio, 2001b; Cole, 2001; Stanley, 2006; Umbach, 2007). Conversely, positive and intrinsic factors that may contextualize and affect minority faculty recruitment, experience,
teaching, and retention have scarcely been discussed. More important, qualitative studies have been conducted on minority faculty rather than quantitative research. Another argument for this research concerning the topic of interactions of student and faculty is that the focus has always been on the students. The perceptions and experiences of minority faculty with students are rarely found. Surprisingly, little of the research addresses the degree to which a faculty member’s race influences his or her experience in the classroom and the relationship with different students.

Concerning this missing piece of the literature, I would like to discuss the contribution of minority faculty first. It is believed that the strong points and specialties minority faculty possess can facilitate their interactions with the students.

**Contributions of Minority Faculty**

Some scholars agree that minority faculty is a substantial component for higher education. Most important, faculty members provide students with realistic, approachable, and diverse role models as well as assist in providing more effective mentoring to minority students. In addition to serving as effective role models and mentors, faculty members are supportive of minority-related and other areas of nontraditional areas of scholarship. Moreover, minority faculty can provide a curriculum that features diversity (Guiffrida, 2006; Hurtado, 2001; Lovell, Alexander, & Kirkpatrick, 2002). Finally, minority faculty can give minorities a greater voice in the governance of the nation's colleges and universities (Green, 1989; Mickelson & Oliver, 1991; Washington & Harvey, 1989; Torres, Santos, Peck, & Cortes, 2004). Others view the full representation and participation of minority faculty in the academy as essential to creating multicultural, diverse and pluralistic colleges and universities (Green, 1989; Turner & Myers, 2000).
By analyzing achievement test scores from Tennessee’s Project STAR for high school students, Dee (2001) provided strong evidence that having a teacher of the same race supports increased student performance on statewide standardized achievement tests. From this study, we can assume that in higher education, the presence and visibility of minority faculty can promote students’ achievement. However, there are other concerns before we apply this evidence to higher education. First, the study is conducted among K-12 school settings. We need evidence to prove that it can be applied to higher education. Second, Dee’s conclusion is questionable: it is only a short-term study and the results do not point to the ultimate desirability of same-race assignments, and cannot be used to determine long-term outcomes. Moreover, it also does not “provide meaningful evidence on the exact mechanisms by which own-race teachers might actually influence student achievement (i.e. the varying types of passive and active teacher effects)” (Dee, 2001, p. 22).

There are other researchers that also provide evidence supporting the minority faculty and the benefit to students. Stein (2003) contends indigenous instructors can, in addition to being good teachers, serve as effective role models for local, indigenous students. These studies all point out the real role effect for minority students. Some studies of Native Americans found the importance of hiring qualified Native American faculty and staff to promote a welcoming atmosphere and provide role models for Native American students (Ness, 2002; Tippeconnic & McKinney, 2003). Bergstrom, Cleary, and Peacock (2003) state that same-race teachers have an easier time concerning what is needed from students than teachers who are culturally different from the students they teach. However, it is difficult to know whether the role model effect is coming from minority faculty’s physical presence, or their particular help to those students.
Negative Experiences Between Minority Faculty and Students

The discussion of literature in the previous pages focused on the positive side of the contributions of minority faculty to students. It is necessary to focus on the negative experiences of minority faculty with their students.

Previous literature indicated that many undergraduate students avoid taking classes taught by non-native speakers of English (Rubin & Smith, 1990). According to Hamilton (2002), a great number of minority faculty received few positive and satisfactory student feedback related to their instructional methods. Fitch and Morgan (2003) contend that college students have negative perceptions of non-native speakers’ ability to express themselves. Additionally, studies on international teaching assistants have revealed that undergraduates’ preexisting social stereotypes have a strong effect on how they rate their instructors’ teaching performance (Rubin & Smith, 1990). However, there is little research on issues related to native accents, therefore, it is difficult to identify negative responses from students to their minority faculty, and whether or not, they are dependent on language of minority faculty or not (which includes accent/pronunciation/intonation, discourse).

Apart from negative comments related to language issues of minority faculty, there are other perspectives pertaining to the students’ negative perceptions of minority faculty. The most obvious form of institutionalized discrimination faced by minorities in academia is the lack of representation that can be seen in most faculties on campus (McCormack, 1995). Two minority groups that are most severely affected by this overt form of discrimination are African Americans (Alliman-Brissett, Turner, & Skovholt, 2004; Hughes, 2003; Jackson, 1991; Katz, 1991; Thomas, 1997; Zuriff, 2002) and Hispanics (Austin, & Wagner, 2006; Cardarelli, Cardarelli, & Chiapa, 2007; Piatt, 1997; Reyes & Halcon, 1988; Thomas, 1997). Racial attitudes
held by some White students about African American faculty are still negative (Carter, White, & Sedlecek, 1987; Claney & Parker, 1988; Minatoya & Sedlecek, 1984). These negative attitudes may affect students’ interactions with African American faculty. In a survey conducted by Harlow (2003), 76% of Black faculty felt students called their qualifications into question, while only 7% of White faculty said they encounter similar challenges. Most studies are about students’ attitude toward African American faculty. African American faculty may not be perceived by White students as fulfilling their expectations. Often, the consequence is that African American faculty is judged as inadequate, ineffective, or both (Fouad & Carter, 1992; Powell & Avila, 1986). Liu and Meyer (2005) suggest that minority teachers, on average, have to deal with more student discipline problems than do White teachers. Hendrix (1997a), by conducting qualitative studies, asserts that U.S. students challenge African-American teachers’ credibility more commonly than they challenge the credibility of White teachers.

These observations not only indicate that minority teachers are less appreciated by college students than are native instructors, but also suggest that there are cultural language barriers between students and teachers in classroom communication.

Unfortunately, among the research studies, there are very few that discusses students’ attitudes toward their Asian faculty. The reason for this may be because of the insufficient population of Asian faculty in higher education and less attention to this group.

Based on the limited research that has been explored, two essential elements have emerged as impacting the quantity and quality of relationships between faculty and minority students, or minority faculty and students. The first element is that minority students may encounter difficulty interacting with not-same-race faculty because they do not regard them as realistic role models (Guiffrida, 2005). Tinto (1993) concludes that the availability of
"like-person role models" is extremely vital to the success of minority students. Research suggests that it is of importance for minority students to be exposed to and to engage with people of their same race who have been successful both in K-12 and higher education settings (Burrell, 1980; Chang & Sue, 2003; Dee, 2004; Sedlacek, 1987), as these connections have been linked to increasing their self-confidence, self-identity, and self-efficacy (Gloria & Robinson Kurpius, 1996; Hackett & Byars, 1996). Another reason is that research points out that students often perceive faculty at PWIs as culturally insensitive (Fleming, 1984). Feagin, Vera, and Imani (1996) conclude that African American students attending a PWI perceive White faculty as inaccessible because of their discriminated comments, unawareness to African-American culture, and overgeneralizations of students’ ideas as representing those of all African Americans. Similarly, Fries-Britt and Turner (2002) also find that African-American students are bothered when faculty ask them to represent their whole race by giving the African American perspective on problems and when they discriminate against them not as capable, or less capable than White counterparts. Faculty have also been perceived by minority students as culturally insensitive when they fail to acknowledge or incorporate culturally diverse perspectives into their curriculum and instructions (Feagin et al., 1996; Fries-Britt & Turner, 2002; Sedlacek & Brooks, 1973) because it conveys to students that their histories and traditions are not valued (Marchesani & Adams, 1992).

**Asian Students and Asian Faculty**

Because the main focus of this study is to examine student-faculty interactions, especially across Asian American and White faculty and students, it is essential to take a closer look at Asian students and faculty in higher education. Furthermore, students from different racial/ethnic backgrounds with different histories appear to engage in school and educational
practice at comparable different levels with other minority groups and with White students. Asian American students, as a unique group, need further and thorough exploration.

Even today, Asian Americans are still viewed, more often than not, as foreigners, not as full-fledged citizens. People regard Asian Americans as either obedient and subservient, or deceitful and untrustworthy (Suzuki, 2002; Yu, 2006). There are rarely studies about student attitude toward their Asian faculty. Only Rubin (1998) mentions that White students rate Asian American instructors less credible and less intelligible than their European American instructors.

From history to the present, Asian Americans have encountered unfair conceptions and treatment, which consequently has moderated and shaped their experience of being Asian American in the United States.

**Minority Model**

The educational research on Asian Americans has left many unsolved questions as to what factors, or relationships among factors, influence the academic achievement of Asian Americans (Hurtado, Inkelas, Briggs, & Rhee, 1997; Karen, 1997; McDonough & Antonio, 1996; Teranishi, Ceja, Allen, Suh, & McDonough, 2001). Part of the challenge is that research has continually and consistently found that there is a stereotype about being Asian that predicts success for Asian American students (Hurtado et al., 1997). The most common explanations and perceptions of Asian Americans have been that they are educationally successful, overrepresented in schools, and are a successful or model minority (Hacker, 1992; Nakanishi, 1988; Takagi, 1992). Because of the perceived academic success of Asian Americans, they have often been excluded altogether from racial discourse on educational issues because it is believed that there is no need to address their educational needs or issues (Nakanishi, 1995; Ong, 1994,
So this model minority label obfuscates many of the difficulties that Asian Americans students face.

In contrast to the overwhelmingly negative stereotypes associated with African American students, Asian American students have been labeled as a model minority, one that is diligent, respectful to teachers, and demonstrates superior academic abilities especially in mathematics and science (Allis, 1991; Kitano & Sue, 1973). The results of a current meta-analysis (Tenenbaum & Ruck, 2007) also suggest that teachers hold higher expectations for Asian American students compared with White and other minority students. These findings are not surprising given that Asian Americans are often regarded as model minorities and are believed by teachers to be more prepared academically than students from other backgrounds (Chang & Sue, 2003; Wong, Lai, Nagasawa, & Lin, 1998). This belief is not limited to teachers. Wong et al. (1998) demonstrate that Asian American, African American, Native American, Latino/a, and White students claimed that Asian Americans are more academically minded and received better scores than students from other minority/ethnic groups.

According to Gardener (1995), a report by the United States Commission on Civil Rights listed four ways the model minority myth is harmful to Asian Americans. First of all, the model minority image distracts people’s attention from real social, economic, and cultural problems that plague many aspects of the Asian American. Second, it diverts the public away from consistent and continuous racial discrimination facing Asian Americans. Next, this stereotyped perception places pressure and anguish on young Asian American students who think they need to be successful at schools and universities. This has been linked with mental health issues and suicides among Asian students. Last but not the least, the model minority sparks competitions
and resentment between and among other racial minority groups who are asked, if Asian Americans can survive and succeed, why can not they (Gardener, 1995).

**Invisible Minority**

Unfortunately, in the United States, discussion of race is generally framed in terms of Blacks and Whites. Only recently have educators begun to pay attention to other races like Latino/a, however, the focus on Asian Americans is far from enough. What follows describes how the stereotype of Asian American as minority model perception affects Asian students’ experience and their relationship with the faculty. Despite the fact that Asian Americans have been on the mainland of the United States for more than 150 years, Asians are still identified as “strangers from a different shore” (Takagi, 2000, p. 36-37). The voices from Asian Americans are excluded from the mainstream discourse on race.

Owing to the model minority status, Asian Americans are consequently turned into an invisible minority on campus. Many people assume that Asian Americans will succeed with little support and without special programs and services which colleges and universities provide for other minorities (Hune, 2002; OSajima, 1995; Suzuki, 1994). Some scholars have described Asian Americans as the "invisible Americans," even though the fact is that they constitute the third largest racial minority group in the United States after Latina/os and African Americans.

Considerable empirical research on access and equity in higher education for different racial and ethnic populations frequently excludes Asian Americans from the discourse or misrepresents them. For example, in a well-recognized book by Astin (1982), *Minorities in American Higher Education*, which is highly quoted by researchers of minority students, the author has thoroughly researched current trends and perspectives of minority students in American institutions. Surprisingly, he categorizes students in the United States as Whites,
Blacks, Chicanos, Puerto Ricans, and American Indians. In other words, he excludes Asian Americans in his study. In another book written by Ogbu (1978), *Minority Education and Caste*, the author determines that Asian Americans are not educationally disadvantaged and thus excluded them from his studies. Nowadays, Asian Americans are still quite invisible. For example, Cole (2007) thinks Asian American students, unlike their Latino/a and African American counterparts, are less often studied. Additionally, there are countless studies exploring African American students’ interactions with faculty. However, there are almost no empirical studies conducted exclusively about Asian Americans and faculty.

In many qualitative studies based on interviewing Asian Americans, it is revealed that the voices and hardships of Asian Americans are often stereotyped, misrepresented, and marginalized. For example, Asian American students are regarded as “others” even though some of them were born in America; they sometimes are mistreated by their White peers of their Asian identity, their value; and omitted or marginalized in mainstream textbooks and school curricula (Banks, 2009). According to Banks (2009), teachers who provide instruction in predominantly White schools and districts often state that they do not have a program or plan for multicultural education because they have few African American, Hispanic, or Asian American students. Mainstream educators viewed inter-group education as something for schools with racial problems and as something for “them” and not for “us.” This may explain why Asian Americans students, like other minority groups, are marginalized in the dominant school curriculum.

These examples illustrate how these characterizations reinforce stereotypes and perceptions of Asian Americans as the successful or model minority and how consequently Asian Americans are “excluded altogether from racial discourse on educational issues because, perhaps, that there is no need to address their educational needs or issues” (Teranishi, 2002b, p.
Furthermore, the homogenization of a heterogeneous racial group erases the variation within identity categories and depicts different social and institutional experiences as monolithic “issues of diversity” (Ibarra, 2001; Teranishi, 2002b; Walker-Moffat, 1995; Yanow, 2003). Asian Americans are still facing serious discriminatory barriers in society. For example, Asian Americans were initially not included as a protected minority group under federal affirmative action regulations (Suzuki, 2002); they are still excluded from the considerations of many universities in constructing categories for minority scholarship and in recruiting minority students from admission (Takagi, 1992). The subtle discrimination policies and perception of invisibility confronting Asian American students has the very real effect of limiting their numbers and their participation. A major controversy erupted in 1983 when the Asian American Students Association at Brown University issued a statement of being discriminated against because of a clear decline in the admission rate of Asian American students to that university. There had been a 44% decline in admit rate in 1975 to only 14% in 1983 (Fong, 2008). After that the spectrum of quotas against Asian American students spread across the country (Arifuku, Peacock, & Glessman, 2003). As greater media attention began to focus on the Asian America admission issue in the mid 1980s, universities like Yale, Princeton, and others came under close scrutiny and even federal investigation. Brown University acknowledged a “serious problem,” and Stanford admitted “unconscious bias” (Fong, 2008). Moreover, investigations at Ivy Leagues universities found admission rates for Whites were indeed higher than for Asian Americans. Thus, the consequences of the Asian American student being ignored can be seen from the number of the admission rate of U. S universities.

In summary, research, policies and political debates about college diversity have primarily focused on the educational attainment of African-American and Latino/a students
compared to White students with little consideration of Asian Americans (Nakanishi, 1995; Teranishi, 2002a). Actually, Asian Americans have been misrepresented through being categorized and treated as minority model and are highly invisible in higher education. A theme throughout the research on college students and higher education discourse on race is that Asian Americans are an understudied group (Hune & Chan, 1997). Moreover, the duality of visibility and invisibility of Asian Americans shows that they can no longer be considered a marginal minority group. I hope this study will go beyond the silencing that surrounds Asian American students’ experience.

Asian Students/Faculty in Higher Education

A study using a nation-wide sample of university students reported that approximately 30% of Asian American students frequently or occasionally felt insulted or threatened by other students because of their racial/ethnic background (Hurtado, Dey, & Trevino, 1994). Asian students report a greater degree of faculty racism compared with other racial groups (Ancis et al., 2000). It is hard to know to what degree Asian American students feel discrimination or racial tension from faculty members. However, based on this data we can predict that the climate at universities is not entirely welcoming and supportive. This may partially explain why in a National College Student Survey, Asian American students, together with their African American counterparts, were the least satisfied with their college life (Hu & Kuh, 2003).

According to literature, Asians show greater preference for people of their own racial background, and among all the other minority groups, Asian feel the least comfortable in interacting with other racial group (Smith et al., 2007). Asian students, like African American students, experience greater pressure in universities than Latino/as.
Empirical evidence does support the perceptions that some Asian American groups are academic high achievers (Hsia & Peng, 1998), and perceptions are prevalent that all Asian American groups are overachieving and well behaved. These so-called positive stereotypes have brought about negative consequences as well. In addition, research has indicated some characteristics that are more culturally and historically related. Some teachers perceive Asian Americans as unassertive, unexpressive, and lacking in leadership skills (Bannai & Cohen, 1985), as well as passive, quiet, and less interpersonally effective than White students (Sung, 1987). Empirical tests of the Stereotype Content Model (SCM) (Fiske, 1998; Fiske, Cuddy, Glick, & Xu, 2002; Fiske, Xu, Cuddy, & Glick, 1999) have revealed that Asian Americans are often characterized as highly competent, hard workers, but this representation does not allow for corresponding levels of sociability (Lin, Kwan, Cheung, & Fiske, 2005). Consequently, the model minority image reinforces stereotypes of Asian Americans lacking interpersonal skills and not often participating in social situations, which include interactions with faculty. These stereotypes may explain why teachers have been found to call on Asian American students less often than on White students (Schneider & Lee, 1990) and to expect less classroom involvement from them. Therefore, we need a closer examination of Asian Americans with the consideration of their unique background knowledge.

Generally speaking, a number of empirical studies have provided extensive evidence identifying predictors (such as years of student and institution characteristics) of student-faculty interactions and their influence on students' educational gains (Gamson, 1967; Pascarella et al., 1978; Pascarella, 1980; Snow, 1973; Terenzini & Pascarella, 1977, 1980; Wilson et al., 1974).

Among the studies on student-faculty interactions across students’ race and ethnicity, most of the research either investigated students’ race/ethnicity in terms of one group called
minority students without differentiating the minority group compared with White students; or delimited minority students’ experiences by only comparing Black and White college students. Relatively little attention has been given to other ethnic and racial groups and the developing multi-cultural context of college (Antonio, 2002; Lundberg & Schreiner, 2004), let alone taking both faculty and student’s race/ethnicity into consideration and paying special attention to Asian American students (Cole, 1999, 2007, 2010a).

All together, the experiences of Asian Americans in higher education have presented a portrait of historical exclusion, segregation, academic success, and discrimination. At the same time, the stories of Asian Americans have provoked social agency and activism. Discrimination against Asian Americans in higher education is not only something that happened in the past, it continuously and consistently exists.

Based on history, empirical and qualitative studies, and in conjunction of this author’s observations and experiences, there are three reasons that can be used to explain why Asian Americans’ higher educational experiences are understudied, and why Asian Americans perspectives are sometimes excluded from discussion. The first reason may be very explicit: there are not enough Asian Americans in higher education to warrant consideration. Another reason why Asian Americans are excluded from the discourse on race is because Asian Americans are regarded as inassimilable foreigners as opposed to other American minorities. In many qualitative studies, Asian Americans complain that their image is always as foreigners, which has been perpetuated by the Orientalist discourse that thinks there are innate differences between the East and the West (Lee, 2009; Sue & Sue, 2008). The stereotype in this regard suggests and implies that the Asian people can never become American. Perhaps that is why many Asian Americans themselves conclude that they can have no accent and be perfectly in
tune with the culture, but on the outside, Asians are still Asians. There is no way that they are Americans. In other words, regardless of how long Asians have been in the United States, the image of foreigners and outsiders persists. This phenomenon implies that Asians are not legitimate members of U.S. society. Related to this image issue is that Asian Americans in the United States are often seen as immigrants instead of minorities. The third and the final reason for exclusion of Asian Americans voices from the discourse is the influence of above mentioned model minority. In the minds of most Americans, Asian Americans are problem free. Other minorities like African Americans, Latino/as, and Native Americans are minorities precisely because they experience disproportionate levels of poverty and educational underachievement.

In summary, the visibility of Asian Americans in American universities and in literature is not enough—this is why the diverse and complex experiences of Asian American students and faculty in American higher education remain hidden. We do not want the stereotype silences of the educational and social experience of Asian American students and faculty. This study will focus on White and Asian faculty/student relationships to determine the relationship of student-faculty interactions based on race and on students’ learning and perceptions toward multicultural and race issues. In next section, the author will discuss the process for conducting this inquiry.
CHAPTER 3. RESEARCH METHOD

Introduction

According to the Minorities in Higher Education Twenty-third Status Report (Ryu, 2008), college enrollment among Asian Americans at postsecondary institutions in the United States has risen dramatically over the last decade, more than doubling from 500,000 in 1990 to over 1 million in 2009, up 40%.

In comparison, the enrollment for Whites during that same time period grew rather slowly, from nearly 10.7 million to 11.4 million (NCES, 2010). Therefore, the White student population proportion declined 20%. These educational enrollment figures underscore Asian Americans’ strong college attendance trends and point to the significance of studying this group.

Research Design

Introduction and Rationale for Design

The research design describes the plan for collecting and analyzing data in order to answer the research questions (Flick, 2007). Integral to the research design is the appropriate selection of methodology.

Quantitative research design usually involves an approach using numerical measurements and data analysis from social sciences (Marshall & Rossman, 2006; McIlwain, 2006; Muijs, 2004). Providing statistical data of a reasonably large and appropriate sample, it can also test existing theories and provide statistical descriptions based on large number of participants. Moreover, quantitative research is conducted when one is interested in establishing relationships
among measurable variables. In quantitative research, every member of the population has an equal opportunity to be selected for participation.

Case studies have become one of the most common ways of approaching a topic from both qualitative and quantitative perspectives, especially in qualitative inquiry. According to Stake (2007), in a case study, researchers can study analytically or holistically. This inquiry was a case study using VCU from which to draw a sample of student and faculty.

The proposed inquiry was a nonexperimental, comparative research design to explore the relationship of race and student-faculty interactions. At the same time, I hoped to find out if there is relationship between the student-faculty interactions and students’ academic achievement and perceptions. If possible, the study will result in discovering patterns of student-faculty interactions and the frequency of student participation in these interactional practices. The patterns of interactions may influence directly and indirectly an improvement in student learning. Levels of student-faculty interactions were measured in four categories: (a) quality, (b) quantity of student-faculty interactions, (c) equitable issues, and (d) academic and social forms of interactions. Students’ academic achievement was measured through their self-report of current GPA comparing their high school GPA. Students’ perceptions on race issues depended on the self-assessment items in the survey.

Surveys were randomly sampled from the listserv of VCU White and Asian American undergraduate students and VCU faculty. There are approximately 17,000 White and 2,700 Asian American undergraduate students (including part-time undergraduate students) at VCU, and 1,500 White and 209 Asian faculty members. This study randomly sampled 1,113 White and 990 Asian American undergraduate students, and 1,018 White and the entire 140 Asian teaching faculty. Data were collected via web surveys hosted and administered through the
Office of Assessment in the School of Education at VCU. Because participants were randomly chosen from VCU undergraduate students and faculty members on the Monroe Park campus, both the students and faculty who responded to the survey were normally distributed, substantially representing the diversity of composition and population of VCU students and faculty. Specifically, the participants were representative of the population of White students and faculty; a preponderance of the Asian American students and faculty is necessary because the main purpose of this study was to compare and contrast the interactions between White and Asian students and faculty. Glaser and Strauss (1967) assert when researchers can maximize the differences within comparative groups, they may bring out the “widest possible coverage on ranges, continua, degrees, types, uniformities, variations, causes, conditions, consequences, probabilities of relationships, strategies, process, structural mechanisms, and so forth, all necessary for elaboration of the theory” (p. 57). Though the number of target subjects of Asian American students and faculty was small (representing 10% of all Asian American student population), the diversity of the students was wide, typically representing vast cultural differences from nations of North America and Asia. Such cultural extremes allowed for a form of maximum variation sampling, a sampling strategy that may turn the weakness of a small sample into strength (Patton, 1990).

**Research Questions**

The purpose of this study was to understand student-faculty interactions across race and the relationship of these interactions on student’s learning and multicultural perceptions. The research was divided into two separate strands: faculty perceptions and students’ perceptions. The primary research question was: What is the quality and quantity of student-faculty
interactions for (a) Asian/White faculty and students, (b) Asian/White students and faculty?

Other questions included:

1. Are there differences by race in perceptions of student-faculty interactions? Here student-faculty interactions include:

   (a) quantity (time spent and frequency on student-faculty interactions),
   (b) quality (perceptions of faculty and their instruction, and overall evaluation of student-faculty interactions),
   (c) equitable issues (minority faculty composition, racial attitude toward student/faculty),
   (d) social and academic quality of student-faculty interactions.

To be specific, will race have any positive/negative effect on student-faculty interactions? Will race make student-faculty interactions different? Will Asian students spend the same amount of time with their faculty members? Do White students have different opinions on the instruction they receive, and satisfaction levels toward their faculty?

2. What are the relationships of race and student-faculty interactions on students’ academic achievements? What different forms of contact between students and faculty contribute to student academic achievement?

3. What are the relationships of race, student-faculty interactions and students’ multicultural perceptions?

Instrument

Origins of the Instrument

The instrument in this study was divided into two strands: faculty’s perceptions and students’ perceptions (see Appendixes A and B). These two surveys were adapted from several sources: (a) the Cooperative Institutional Research Program (CIRP) Freshman Survey and
Faculty Survey, (b) Your First College Year Survey (YFCY), (c) the National Survey of Student Experience (NSSE), (d) College Student Experiences Questionnaire (CSEQ), and (e) the Common Belief Survey.

This study selected items from the above mentioned surveys that directly or indirectly related to student-faculty interactions, which were identified by time spent with faculty, receiving advice from faculty regarding course selection, assignments and/or personal life, and overall evaluation of student-faculty interactions. These questions facilitated the understanding of the nature of student-faculty contact, and its impact on students’ academic achievements and social perceptions. Items that were unrelated to the purpose of this study, such as how much time students spent with their peers, what kind of community activities the students participated in had been excluded.

**Origins of the Survey**

The Cooperative Institutional Research Program (CIRP) Freshman Survey and Faculty Survey instruments were designed and conducted by the Higher Education Research Institute (HERI) at UCLA. Starting in 1966, the CIRP Freshman Survey gathered data on a yearly basis on more than 13 million students at over 1,900 institutions. To present date, it is the largest study of American’s universities and colleges (Pryor et al., 2010). Both the student survey and faculty survey administered by HERI are the largest and the most prestigious and reliable survey in the United States.

Your First College Year (YFCY) was administered as a follow-up survey to the CIRP Freshman Survey. The purpose of this survey was to provide investigators, educators, practitioners, and researchers in the higher education realm with the newest comprehensive information on the academic, social, and personal life and development of freshmen students in
college. The survey was based on the foundation of more than three decades of research from the Higher Education Research Institute, the CIRP Freshman Survey, and from more than 20 years of exploration of the freshman experience at the National Resource Center for the First-Year Experience & Students in Transition (Higher Education Research Institute, 2011).

The National Survey of Student Engagement (NSSE) instrument is another national survey of undergraduate with the aim of representing students at American colleges and universities (NSSE, 2011). The NSSE annually gathers information and data from hundreds of 4-year colleges and universities all over the United States about student academic life, academic experiences at schools, and activities that institutions provide for student learning and personal development. Currently, over 1,400 American and Canadian colleges and universities have participated in NSSE. The results of the survey give us a picture of how undergraduates manage their time and what they learned and gained from their college life. Survey items on the NSSE represent empirically proved "good practices" of undergraduate education. That is, they reflect behaviors by students and universities that are associated with desired outcomes of college (NSSE, 2011).

The College Student Experiences Questionnaire (CSEQ) is also known for being a comprehensive and nation-wide survey instrument, which is being utilized by many institutions in the United States. The main purpose of this instrument is to find out how to improve the quality of undergraduate student learning environments. The survey is dedicated to measuring the quality of student college life, perceptions of the campus environment, and improvement toward important educational goals (CSEQ Program, 2007). Pascarella et al. (1978) and Pascarella and Terenzini (1977, 1983, 1991, 2005) used the CSEQ as their empirical research survey on student-faculty interactions.
The Common Belief Survey was developed by the organization, Teaching Tolerance. This organization focuses on advocating for underrepresented students, and providing information on the pitfalls of bias education. The survey has been utilized for more than a decade. In 1991, Teaching Tolerance began supporting the efforts of teachers and other educators to promote respect for differences among students and teachers, and an appreciation of diversity (Teaching Tolerance, 2001). However, this survey is not particularly designed for higher education. Moreover, there is no information on the reliability and validity of this survey.

Validity and Reliability of Original Instruments

The design team that developed the NSSE, CIRP, YFCY, and CSEQ instruments invested considerable time to make sure all the items on the surveys were clearly worded, well defined, and had high face and content validity. For example, in 1999, in order to test the utility of the NSSE as an approach to gathering data on undergraduate college life, and to test relevant administration procedures from a technical aspect, the NSSE conducted two pilot projects. The first, a "tryout" phase was tested in the spring and involved 12 institutions and was followed by a larger pilot test on approximately 56 institutions in the fall. In 2008, NSSE conducted another in-depth examination to see how universities in the United States were using the NSSE results. In 1998 and 1999, the design team of CSEQ devoted quite a long time to making certain logical relationships existed among the items in ways that were consistent with the results of objective measures and with other research.

In addition, the design teams for these instruments have made intensive and thorough study of the validity and credibility of self-reports. According to Baird (1976), Berdie (1971), Pike (1995), and Turner and Martin (1984), there are main factors associated with the accuracy of self-reports. The first factor is related to a subject who answers a survey question and cannot
provide accurate information. If the subject has not had enough experience to answer a question, or does not understand the question, it will influence the credibility of his/her self-report. The second factor is related to unwillingness on the part of the subject to provide truthful information (Aaker, Kumar, & Day, 1998). Participants may intentionally provide inaccurate information regarding past events or background information. However, people have a tendency to provide truthful information when survey questions are related to their past experience of behavior unless the questions are very sensitive or put the respondents into an awkward or embarrassing situation (Bradburn & Sudman, 1988).

**Increase in the Validity and Credibility**

In order to increase the validity and credibility of self-reports, the study survey was initiated in spring semester, May 2010. In this situation, even the first-year students were enrolled the previous term. Therefore, all the students and faculty who were sent the survey had enough experience with the institution to render an informed judgment.

The questions concerned experiences of students and faculty within the recent past. Memory recalled with regard to time usage was enhanced by asking students/faculty about the frequency and quality of their interactions with their faculty/students during the current school year, a reference period of 6 months or less. To eliminate the variability in week-to-week fluctuations, students and faculty reported the number of hours spent in each of the activities during a typical week, which also allowed an accuracy check on the total number of hours students and faculty reported. The format of most of the response options was a simple rating scale; from *strongly disagree*, to *strongly agree*, which helped students accurately recall and record the requested information, thereby minimizing this as a possible source of error.
Most of the items on the survey have been used in other nation-wide and well-regarded college student and faculty research programs, such as the University of California at Los Angeles’ CIRP (Astin, 1993; Sax, Astin, Korn, & Mahoney, 1997) and Indiana University’s CSEQ Research Program (Kuh, Vesper et al., 1997; Pace, 1984, 1990). According to the summary reports from UCLA and CIRP, responses to the Educational and Personal Growth items have been shown to be generally consistent with other evidence, such as results from achievement tests (Brandt, 1958; Davis & Murrell, 1990; DeNisi & Shaw, 1977; Hansford & Hattie, 1982; Lowman & Williams, 1987; Pike, 1995; Pace, 1985).

Apart from the validity and credibility of self-reports, many researchers are studying the validity of self-reported time (Converse & Presser, 1989; Gershuny & Robinson, 1988). Diary entries tend to be more accurate than estimates of time usage. However, if the participants are provided with a frame of reference to use, and are asked information about recently happened activities, in the past 6 months or less, the threat to validity can be decreased (Converse & Presser, 1989). The reason for betterment of threat to validity is because some particular events will help participants’ memory recall and decrease the possibility of misrepresenting the facts by changing them; the trend is for participants to echo what happened in the past as happening more recently than they actually did occur (Singleton, Straits, & Straits, 1993). In addition, asking more than one time is also beneficial to decrease the outliers.

There is another factor called “halo effect” that will influence validity of student self-report. Halo effect means there is a gap between student-reported absolute value and the actual value in the college life. There is a possibility that in the process of survey, consciously or subconsciously, students slightly exaggerate certain aspects of their life experience and their behavior (e.g., their college grades, the improvement they have made since entering college).
However, halo effect is consistent throughout all universities, and students that participate in surveys do not appear to be at advantage or disadvantaged in one single university or different student population group compared with another.

Generally, the research (Bradburn & Sudman, 1988; Brandt, 1958; Converse & Presser, 1989; DeNisi & Shaw, 1977; Hansford & Hattie, 1982; Laing, Swayer, & Noble 1989; Lowman & Williams, 1987; Pace, 1985; Pike, 1995) concluded that if any of these conditions are satisfied, self-reports are valid: (a) the participants have experience and know the information the survey asks, (b) the items in the survey are clear with no ambiguity, (c) the survey asks what happened recently, (d) the participants need serious and thoughtful thinking before answering the questions, and (e) the participants will not feel threatened or embarrassed. These five instruments are all intentionally designed to satisfy these five conditions.

In conclusion, all of these instruments have been used national wide and have existed for decades. They utilize empirical self-report tools to provide a measurement of quality, quantity of student-faculty interactions, student academic achievement, and student learning from both faculty members’ and students’ perspectives at universities. They are becoming increasingly helpful instruments in improving student academic achievements and social interactions, strengthening student-faculty relationships, furthering understanding of people from different cultures and ethnic groups, and building public confidence in the commitment of colleges and universities to improve teaching and learning.

**Structure of This Instrument**

VCU is composed of two campuses; the Monroe Park campus is the main academic division of the university, and the VCU Medical Center (MCV) is the medical division. I
surveyed undergraduate students that the Monroe Park campus, and the undergraduate population in the health professions on the medical campus.

The VCU Cross-Race Student-Faculty Interactions Survey (student survey and faculty survey) asked White and Asian American full-time undergraduate students and full-time faculty at the Monroe Campus to report:

1. Quantity of student-faculty interactions that included the frequency with which they interacted with their faculty and communicating through email with faculty/students, how much time they spent, such as meeting faculty/students during office hours and outside of office hours.

2. Quality of student-faculty interaction that included engaging in academic student-faculty activities that represented good educational practice. Students and faculty were asked to record their opinions involving the nature of the student-faculty relationship. In other words, the survey asked whether students felt it was very easy get to know faculty, or if interacting with faculty/students had been a source of stress for both students and faculty. The items for quality of interaction asked if students /faculty were satisfied with the amount of contact with faculty/students, quality of contact with faculty/students, and quality of instruction. In addition, in this instrument, direct measures of students/faculty satisfaction could be obtained from questions to test quality such as faculty/student evaluations of the quality of academic advising they received/gave.

3. Equitable issues explored whether students/faculty felt discriminated against based on their race/ethnicity, and whether they had heard faculty/students stereotypes about their race/ethnicity in class

4. Social and academic forms of interaction. Academic interactions included asking faculty for advice and help to improve writing, working with faculty/students on activities other
than coursework, talking with faculty/students about information related to a course students are taking, and discussing academic program or course selection with faculty/students etc.

Additional items assessed the amount of social engagement between the faculty and students during the current school year, such as being a guest in a faculty member’s house, having a drink with faculty/students after class, etc.

After these questions had been answered, students reported their current GPA and estimated their perceptions associated with multiculturalism, such as if they could understand more of people from different racial and ethnic groups, and if they could tolerate different opinions from different people. These estimations were mindful of value-added approaches to outcomes assessing students’ multicultural perceptions and judgments about the impact of VCU’s multicultural context and racial environment on students. At the end of the survey, students/faculty were asked to provide information about their background, including gender, full-time or part-time, native language, race or ethnicity, citizenship, years at school, and major. Students were also asked to provide information about their parents’ education and living situation.

In summary, using self-reports from students and faculty to assess the quality of undergraduate education is common practice (CIRP, 2007; Cole, 2007; Kuh, 2007). Some outcomes of interest cannot be measured by achievement tests, such as students and faculty members’ attitudes, values, and gains in social and academic interactions. Student and faculty reports are often the only meaningful source of data for indicators of interactions between students and faculty, such as how much time students/faculty spent on student-faculty interactions on and off campus, in and out of class. Moreover, all of these surveys have been administered for over decades (the surveys administered by CIRP have been used for nearly 40
years). It is possible to observe the stability of survey questions administered to different cohorts down through these years. The questions in these surveys exhibit a great deal of stability and continuity over time. Except for slightest fluctuations due to sampling error, in repeated trials the accumulated results are quite similar. Moreover, based on the introduction of these five surveys, it was not hard to notice that a large number of the questions on YFCY, NSSE and CSEQ surveys were the same items or very similar items to the CIRP Freshman Survey. Therefore, one may assume that most of the information that the CIRP survey provides also applies to other similar surveys as well—the primary disparity being that the margins of error are likely to be modestly larger due to the considerably smaller sample size.

In order to establish the validity and reliability of the instruments, the process of the data analysis was as follows:

1. A table of specifications was utilized to indicate each item and from which national survey it originated (see Appendix C).

2. A pretesting was utilized to test if the surveys were clearly phrased and easily understood. Experts in this field tested the structure and content of the surveys. Later a pilot study was conducted to test the initial reliability and validity of this survey.

3. A factor analysis was run to determine the reliability testing of the questionnaire. Factor analysis is an empirical approach to establishing construct validity (Kerlinger, 1973). The factor analysis was used to identify the underlying properties of student-faculty interactions represented by items on the survey. The factor analysis is described in this chapter and other analyses will be described in more detail in Chapter 4.

4. Because the response of the web survey was less than 80%, a nonresponse bias test was run trying to identify the differences between the participants and nonparticipants.
5. In order to increase the validity and credibility of self-reports, I initiated the survey in the 2010 spring semester. Student participants selected to complete the student survey ranged from first-year students to seniors who were enrolled the previous term. Therefore, all those who were sent the survey had enough experience with VCU to render an informed judgment. The questions were about common experiences of students within the recent past. Memory recalled with regard to time usage is enhanced by asking students about the frequency of their participation in activities with their faculty members during the current school year, a reference period of 6 months or less. Most of the items on these two surveys have been used in other long-running, well-regarded college student research programs, such as UCLA's Cooperative Institutional Research Program (Astin, 1993; Sax et al., 1997) and Indiana University's College Student Experiences Questionnaire Research Program (Kuh, Vesper et al., 1997; Pace, 1984, 1990). Responses to the Educational and Personal Growth items have been shown to be generally consistent with other evidence, such as results from achievement tests (Brandt, 1958; Davis & Murrell, 1990; DeNisi & Shaw, 1977; Hansford & Hattie, 1982; Lowman & Williams, 1987; Pike, 1995; Pace, 1985). To sum up, these are factors to ensure high validity and reliability of this study.

Site and Participant Selection

The Setting

Virginia Commonwealth University is the largest university in Virginia and ranks among the top 100 universities in the country in sponsored research. Richmond, Virginia, infamously recorded in American history as the former “Capital of the Confederacy,” now boasts a population that is majority African American, with a steadily increasing Asian and Hispanic population. Since 2008, more than 32,284 students have enrolled in VCU, which includes
22,792 undergraduates, 7,869 graduates, and 1,623 first professionals (VCU Center for Institutional Effectiveness [VCUCIE], 2011). The highly diverse campus of VCU is a mixture of peoples, classes, lifestyles, and cultures. Unlike the majority of universities in the United States that are predominantly White institutes (PWI), or unlike other traditional Black institutes (TBI), the study setting is a highly diverse university in which White students account for slightly over half of the student population.

According to the Student Demographics Fall 2009 Census II, the student body included: 17,407 White students (54.6%), 5,466 African-American (17.1%), 2,749 Asian (8.6%), 170 American Indian (0.5%), 958 Hispanic (3%), 1,429 international students (4.5%), and 3,728 (11.7%) not reported students (VCUCIE, 2010).

In fall 2008, there were 1,927 full-time, instructional faculty members at VCU. Within this group, 941 (50%) held tenure track (tenured or tenure-eligible) appointments. Over the last 10 years, the net number of faculty increased by 328 while the number of tenure track faculty declined by 17. The number of faculty with collateral appointments grew by 345 (a 57% increase). According to the VCU Tenure Status of Full-time Instructional Faculty Fall 2009 by Ethnicity report, there are 1,528 White faculty, 204 Asian faculty, 101 African American faculty, 52 Hispanic faculty, and 5 Native American faculty (VCUCIE, 2009).

**The Sample**

Because of the cell size of the Asian faculty members (67 on the Monroe Park Campus and 137 on the MCV Campus), I decided to sample all the teaching Asian faculty members at VCU (140 Asian faculty have experience of teaching undergraduate; the rest of 64 are either research assistants, post doctorates, or only teach graduate students). The subjects were also composed of randomly selected White students, Asian American students on the Monroe Park
Campus, and White faculty from both Monroe Park and MCV campuses. The participants included full-time White and Asian students during the academic years 2006-2010, and full-time faculty, for a total unduplicated participant sample of over 20,000 students and 1,900 faculty members. This grouping of participants, that is, the White and Asian American faculty members/students received the web survey on student-faculty interactions in the middle of April 2010.

Asian American students were classified as (a) American-born Asian or non-American-born Asian, and (b) first, second, or third generation immigrants from Asian countries. They were asked to complete a number of self-ratings on a variety of traits (GPA and perceptions at VCU). At the same time, they responded to various items concerning student-faculty interactions categorized by quality, quantity, equitable issue, and different quality of student-faculty interactions. Additionally, the students were asked about their perceptions relating to issues about their tolerance to different races and racial discrimination, etc.

According to the Krejcie and Morgan (1970) standards of determining sample size for research, in order to receive a representative sample of 2,479 Asian students (this number was on the website, but it was hard to know if they were full- or part-time students), 330 students were needed. To guarantee at least 330 student responses, the survey required at least 990 full-time Asian undergraduate students.

In the same case, to ensure a representative sample of 11,161 White undergraduate students, 371 students responses were needed. In order to get 371 responses, I needed to survey at least 1,113 full-time White students.
To receive a representative sample of the White teaching faculty on both campuses \((n = 1,528)\), at least 308 faculty member responses were required. In order for that many to respond, 1,018 samples were contacted. Therefore, 1,018 randomly selected White faculty members from both campuses were required. Because there was not enough Asian faculty at VCU for the sample, all 140 Asian instructional faculty members on both campuses were surveyed.

The web survey participation was restricted to undergraduate students who matriculated at/before the fall 2009 at VCU and full-time faculty members. White faculty members (1,018) and Asian faculty members (140) were randomly selected by the director of the Human Resources at VCU. The faculty member participants had a return rate of 33.5\% \((n = 388)\) after the initial survey and two email reminders. The overall return rate was 34.6\% \((n = 401)\) after the third email reminder to the Asian faculty. However, among these 401 faculty members who responded to the survey, there were only 238 valid surveys, which means the rest of 163 surveys were either unfinished, or were declined for participation by the respondents. White (1,113) and Asian (990) undergraduates were randomly chosen to participate in this web survey. The response rate from students was 24.1\% \((n = 509)\).

Ultimately, the sample for this study included 1,158 faculty members and 2,103 students from both the Monroe Park and MCV campuses, with all students completing at least 10 months of university study and experience.

Because it was random selection, the participants in the sample should represent sizeable cultural differences from nations from America, Europe, South American, and different countries from Asia. Such cultural extremes allowed for a form of maximum variation sampling (Patton, 1990). Glaser and Strauss (1967) observed that when researchers can maximize the differences
within comparative groups, they may bring out the “widest possible coverage on ranges, continua, degrees, types, uniformities, variations, causes, conditions, consequences, probabilities of relationships, strategies, process, structural mechanisms, and so forth, all necessary for elaboration of the theory” (p. 57).

**Procedure and Data Collection**

From the literature, it is easy to see that within the research context of the development of student-faculty interactions in college, Asian American student-faculty interaction is an emergent area of study. Only a handful of empirical studies have examined Asian American undergraduates’ experience with either same or different race faculty (Rubin, 1998, Suzuki, 2002; Takagi, 2002). Thus, additional research on this topic can help identify possible key factors that may play a role in fostering Asian American students’ interactions with racial and nonracial faculty. This study addressed the gap in empirical research by identifying that race may influence students, especially White student and Asian American student interactions with faculty.

**Measures**

To identify behaviors and activities related to undergraduate students and faculty relationships worth exploring, the principal investigator and the researcher reviewed relevant literature to develop Undergraduate Student Interactions With Faculty, a series of questions representing a wide range of activities related to undergraduate students and faculty interactions. Questions included how much time the students might spend with their teacher, what forms of interactions might be involved, and the skills that students could gain through these experiences. After extensive vetting of many items, 20 questions were presented for student respondents and 16 questions for faculty respondents who indicated on the core CIRP, YFCY, NSSE and CSE
questionnaire that they had completed undergraduate students and faculty (Appendixes A and B contain a list of the undergraduate student and faculty interactions items used in this analysis for student survey and faculty survey).

The administration of the survey followed the Dillman’s Tailored Design Plan (Dillman, 2007) with pretesting; multiple contacts by email explaining the purpose, confidentiality; email reminders; and appreciation for participation. The survey took approximately 20 minutes to complete.

**Pretesting**

Pretesting is a procedure that can be done by sending surveys to a small sample of the respondent population to see if there are any problems, any production mistakes in printing the surveys, or to test if the questions are clearly stated and if survey-takers can understand the questions in the survey (Dillman, 2007). Pretesting generally includes four sequential stages:

1. The survey is reviewed by knowledgeable colleagues or experts and analysts to finalize the content in order to guarantee that the construction process can be undertaken.

2. Interviews are conducted to evaluate cognitive and motivational qualities of a survey to see if participants can understand questions as intended by the survey sponsor and whether questions can be answered accurately (Forsyth & Lessler, 1991).

3. A pilot study is conducted in the event that some questions may be not answered by the first two stages. The pilot study tests if the length of the survey is appropriate and to emulate procedures proposed for the main study.

4. Revisions are made on the design of the survey by adding additional information to improve response rate, remove or add more survey questions.

5. Final checks are made to see if there is anything that can be revised.
In this study, the student investigator chose 30 respondents (15 students and 15 faculty) by snowball to do the pretesting to determine: (a) how long it would take for student/faculty to finish the surveys and appropriate time length, (b) if the words and questions in the surveys were understandable and consisted of all of the necessary questions, (c) did all questions have an answer that can be marked by every respondent, (d) if some of the questions could be removed, (e) if the responses used in the survey could be compared to census data or results from other surveys, and (f) what response rate could I expect?

The measurement instrument for this study was tested for reliability from pretesting, which included expert review, participants’ interview, pilot study and final check. Further consideration of the instrument reliability test was detailed in the pretesting section of the following session. The expert review included some experts from the VCU School of Education recommended by the principal investigator.

Process

This quantitative study used a self-administered web survey. In order to explore the quantity and quality of student-faculty interactions across faculty and students’ race, this inquiry studied White and Asian American students and faculty at VCU. All the procedures followed Dillman’s Internet Survey procedures (Dillman, 2007).

Initial contact emails were delivered to (a) the directors of the Center for Teaching Excellence, the Center for Institutional Effectiveness, the Office of the Provost for Academic Affairs, and the Division of Student Affairs and Enrollment Services in the university to solicit relevant information, data, and facts necessary for establishing background knowledge of VCU students and faculty; (b) the VCU Human Resources Office, the Director of Human Resources Services and Compensation, and the Office of the Provost of VCU to secure permission on how
to obtain the list of names and emails of faculty and undergraduate students by race/ethnicity at VCU; and (c) the Office of Multicultural Student Affairs to obtain a list of VCU Minority student organizations. I also emailed the presidents of every minority student organization to introduce the upcoming study project, purpose, and obtain support from minority students at VCU. Inherent in research are ethical considerations and participant protections. Safe-checks employed were discussed, including informal consent and Institutional Review Board (IRB) approval. After the receipt of IRB approval in April 2010, the process for data collection began.

White and Asian American students on the Monroe Park campus and White faculty were randomly chosen, together with all Asian American faculty members, and were contacted by email and asked to participate in an online survey.

After the process of gathering data began, multiple email contacts were made through the Office of Assessment to prospective faculty and student participants. The formal contacts included introduction of the purpose of the study, initial communication to solicit participants’ support and help, web surveys, two reminder emails to those who had not participated yet, and appreciation emails to those who participated.

Survey Response

Faculty experience of student-faculty interactions. All faculty members and students were surveyed via the web in spring 2010. A total of 265 faculty participants returned the survey and 151 had completed the survey after the initial web survey. Among the 151 completed surveys, 146 were from White faculty and 5 were from Asian faculty. Because the first survey was administered in April 2010, the student participants were those who spent at least 6 months in the university. A total of 314 students participated and 206 surveys were completed. And among the completed surveys, 123 were from White students and 82 were Asian students.
Two email reminders were sent after 2 weeks, respectively. These two follow-up emails resulted in 231 completed faculty surveys and 312 completed student surveys. However, there were a total of 18 respondents from the Asian faculty.

Due to the low response rate from the VCU Asian faculty, upon the IRB approval for the research change, a third email reminder was sent at the end of October 2010 to Asian faculty. The third survey was sent to Asian faculty only and it was comprised of the same items as the initial survey. This final email reminder resulted in additional 8 Asian faculty participants.

A total of 238 full-time faculty members participated in the study. There were 124 (52%) female faculty members and 114 (48%) male.

**Student experience of student-faculty interactions.** There were 312 undergraduate students who participated in the study, including 224 (68.5%) female and 103 (31.55%) male students. The following description of data presents the demographic information collected from the participating students.

The information collected from students indicated that 129 (41.3%) Asian and 183 (58.7%) White students participated in the survey. Among them, there were 47 (14.4%) freshmen, 69 (21.1%) sophomores, 91 (27.8%) juniors, and 111 (33.9%) seniors. Most of the student participants (43.7% and 42.8%) lived in residences within walking distance or driving distance, and only 12% students resided in on-campus housing. One hundred forty-nine (45.6%) students stated that both parents had at least a college diploma; 84 (25.7%) students had either a father or mother who graduated from college; there were 94 (28.7%) students whom neither of their parents went to college. The average GPA for students in high school was: 144 (44%) students got A or A+; 157 (48%) students had B; 26 (8%) students had C or D. Student GPA at college level was similar: 121 (37%) students had A or A+; 153 (46.8%) students had B; 53
(16.2%) students had C or D. However, on average, Asian students’ GPA at high school and college level was slightly higher (3.5 vs. 3.28 in high school and 3.25 vs. 3.19 at college). Also, among the student participants, only 74 (22.6%) students’ native language was not English. That is to say, English was the native language for the majority of student participants (77.4%).

The information collected from full-time faculty indicated that 25 Asian (11%) and 203 White (89%) faculty members participated this survey. Among them, 28 (11.8%) teachers were instructors; 98 (41.4%) were assistant professors; 66 (27.8%) associate professors; and 45 (19%) professors. For teachers in the survey, 43 (18.1%) claimed that their native language was not English, and for 195 (81.9%) faculty members, English was their native language. These demographics suggested that there was great diversity of student and faculty body in terms of gender, student years of study, faculty ranking, etc.

**Low response rate.** The response rates of this study were 35% (VCU faculty) and 24% (undergraduate students). These data are below average response rate. According to Langer (2003), the American Association for Public Opinion Research (AAPOR) has issued standard definitions for the sample disposition codes by which response rates are calculated: there are six ways of calculating the response rates, four ways to calculate cooperation rates, and three ways for refusal rates, and three ways for contact rates. The response rate I employed in this study was:

\[
RR = \frac{(I + P)}{(I + P) + R + O}
\]

I = Complete survey
P = Partial completed survey
R = Refusal and break-off
O = Other
NSSE response rates by Carnegie Classification in 2006 ranged from 5% to 82%, the average rate was 34% (NSSE, 2011). The online average response rate is 30% (Hamilton, 2009). Causes of nonresponse are inaccessibility, inability, carelessness, and noncompliance. Reasons for not responding are never received invitation, too busy, did not see any personal benefit, do not remember why, upset with institution, and other (NSSE, 2011).

In order to balance the low response rate, I interviewed nonrespondents from faculty and student groups. At the same time, I compared early to late respondents and did descriptive statistics. That is, I divided faculty/student into two groups: fall semester group and spring semester group and then compared for any differences between early and late respondents by time. There was no consistent trend showing nonresponse bias and no significant correlations between response times. However, because my first survey time was April 29, 2009, it was the last week of spring semester. For future reference, it would be better to avoid bad timing (mid-term exam, final week, etc.) to do survey because timing is the key.

**Data Analysis**

Upon the completion of the survey distribution process, the Office of Assessment gave statistical data through data software SPSS.

Altogether the variables in this inquiry included dependent variables, independent variables, and control variables. The independent variables and the factor scales were chosen based on a review of those items that fit into the conceptual framework as well as those that had been found to be significant in previous national research that was conducted by NSSE, CSEQ, and CIRP.
**Dependent Variables**

**GPA.** The dependent variable for Research Question 2 was student GPA. Although the student survey contained data on student high school GPA in addition to current GPA, I used student current GPA without their high school GPA because the former was the most reliable measure as to how much an individual student benefits from his or her college interactions with faculty. Using both current and high school GPA would require consideration of differential factors (e.g., high school GPA is influenced by SES, neighborhood, etc). The additional information was not available in this survey. However, it was not to suggest that only using students’ current GPA was free of potential problems. GPA was affected by other factors, such as psychological, social, cultural and other reasons that were not measured in this survey.

**Multicultural perceptions.** The dependent variable for Research Question 3 was student multicultural perceptions. To measure students’ multicultural perceptions, students were asked to check the correct descriptions regarding their ability to get along with people from different backgrounds. The factor, multicultural perceptions, included six items related to student multicultural perceptions: (a) gaining knowledge about other parts of the world and other people; (b) becoming aware of different philosophies, cultures, and ways of life; (c) developing the ability to get along with different kinds of people; (d) seeing the world from someone else's perspective; (e) tolerating other beliefs; and (f) cooperating with diverse people. These items were rated on a 4-point scale from 4 = *strongly agree* to 1 = *strongly disagree*. Each item is a direct measure of the students’ multicultural perceptions.

**Independent Variables**

The independent variable for Research Question 1 was race, which was self-identified by faculty and students. The independent variables for Research Questions 2 and 3 were race and
student-faculty interactions. Control variables for students included: (a) sex, (b) parent’s educational background, (c) years of study, (d) residential status, (e) high school GPA, (f) native language, and (g) full/part time status. Control variables for faculty consisted of: (a) years of teaching, (b) native speaker or not, (c) sex, and (d) rank of faculty.

Factor analysis was employed to identify the underlying properties of student-faculty interactions represented by items in both the faculty and student survey. These items were from several national surveys. The examination of the patterns of the relationships among a group of items can assess both faculty and students perceptions. This would also indicate if faculty and students have the same understanding of student-faculty relationships.

By using initial solution, coefficients, correlation matrix, and principal component without choosing varimax rotation, factor analysis was conducted to confirm the saliency of the outcome measure and of the other factors employed in the analyses. The eigen value was larger than 1. In the options, choose exclude cases listwise, sorted by size, and entered the suppress absolute values .5. Having done these procedures, it was found where items had a higher loading. Then I went to the student and faculty questionnaire, read all items belonging to each and every factor, and named the factors according to their similar characteristics.

Small Sample Size of Asian Faculty

After the first email reminder, there were 14 Asian faculty members who completed the web survey. With the second email reminder, the Asian faculty participants increased to 18, which was still not enough. Then I had to submit a change form to the IRB to ask for the third email reminder. The third email reminder added 7 more Asian faculty participants. The smaller number of Asian faculty members would result in smaller effect size. However, when I ran frequency of Asian faculty, the histogram chart indicated the sample from Asian faculty was a
normal distribution with Skewness of .08 and Kurtosis of -.45. In this case, compared to 263 White faculty participants, the small number of Asian faculty did not cause a big problem.

**Factor Analysis**

A total of 238 faculty surveys and 314 student surveys were selected for the analyses, respectively, including 16 single-item variables and 38 factor scales.

The detailed procedures of factor analysis are described in the following. Student-faculty interactions refer to the ways in which students and faculty members deal with their relationships in their academic and social lives. A great variety of different interactions are employed by researchers, such as academic aspects of student-faculty interactions, social aspects of student-faculty interactions, quality of interactions, and quantity of interactions. Actually significant studies define the student-faculty interactions as one big factor. Some educators and researchers have proposed various ways of categorizing underlying student-faculty interactions. By consulting other surveys that concentrate on ethic issues between faculty members and students, I thought it might be better to take the racial aspect of interactions into consideration. However, in empirical studies, there has been no consistent agreement on the underlying student-faculty interactions. Proposed factor structures generally ranged from 2-factor (Antonio, 2001a) to 3-factor models (Anaya & Cole, 2001, 2003; Cole, 1999, 2010). Antonio (2001b) divided student-faculty interactions into quality and quantity categories. As for the 3-factor model, it is composed of (a) course-related faculty contact, (b) advice and criticism from faculty, and (c) establishing a mentoring relationship with faculty. Both models covered different aspects of contact with faculty members, however, they were very academic-oriented contact. Moreover, it failed to point out (a) social aspects of interactions, such as faculty socialization; and (b)
equitable issues in the contacts, (e.g., tension and discrimination among faculty and students of different races/ethnicities).

Student-faculty interactions at the college level are of particular interest, because college is regarded as a critical period during which individuals are shaping their value systems, establishing their cognition, developing independent identities, as well as experiencing different ways of contacting with their faculty members, and consolidating coping patterns for adulthood. At the same time, student-faculty interaction is one of the four benchmarks developed by a national survey, the National Survey of Student Engagement. The other three benchmarks are: level of academic challenge, active and collaborative learning, and enriching educational experience. To date, some national surveys, such as CIRP, CSEQ, and NSSE, have developed some instruments for assessing students’ college life experiences and some items are related to student-faculty interactions. At the same time, some researchers have studied student-faculty interactions. For example, Cole (2002, 2007, 2010) proposed the possibility of three higher order factors: course-related faculty contact (e.g., visiting informally after class, discussing term paper); advice and criticism from faculty (e.g., asking instructor for advice on writing, making appointment to talk about criticism on paper); and establishing a mentoring relationship with faculty (e.g., working on a faculty research project, discussing career plans with faculty).

The student and faculty surveys consisted of 38 items. Cole (2010) proposed that a 3-factor solution could be used to summarize the underlying covariation between the items from these national surveys. However, a lot of studies regarded student-faculty interactions as one factor instead of breaking it down into its components.
Summary of the Methodology

The group of participants for the study included VCU full-time undergraduate students who categorized themselves as either White students or Asian students, and VCU full-time instructional faculty members who are also White or Asian. These students and faculty members are from diverse countries and were enrolled in VCU during the academic years 2010-2011. As detailed previously, this selection of participants was a random selection sample, and for the Asian faculty I used the entire teaching Asian faculty population. Therefore, the sample was not only representative but also indeed a substantial bulk of the population of VCU White and Asian population of student and faculty body. In total, data were collected from 2,103 students and 1,158 faculty members.

Student participants and faculty participants completed the survey on line. The Office of Assessment administered the instrument. As I received the data package from the Office of Assessment, every survey was coded and entered into the SPSS software program. Each subject was assigned an identification code at the time of the initial survey. The four data files (there was one initial survey and three email reminders) were merged to form two complete data sets (one for faculty and one for students) containing all variables from the surveys. Another combined data set that contained only Asian faculty was used for the nonresponse bias analysis.

Thirty-eight items from the student and faculty surveys were modified slightly so that both student and faculty participants rated the 38 items. Responses were on a Likert-type scale, ranging from 1 = Strongly Disagree, 2 = Disagree Somewhat, 3 = Agree Somewhat, to 4 = Strongly Agree.
Results of Factor Analysis

First, the factorability of these 48 items was tested. The Kaiser-Mayer-Olkin measure of sampling adequacy was .854, above the recommended value of .6, and Barlett’s tests of sphericity was significant ($\chi^2 [561] = 3978.77, p < .000$). Moreover, the commonalities were all above .5, further confirming that each item shared some common variance with other.

Principal components analysis was utilized to identify composite items for the factors underlying the student-faculty interactions. The initial eigen values showed that the first factor explained 21.9% of the variance, the second factor 10.9% of the variance, and the third factor 5% of the variance. Factor 4, 5, and 6 each explained 4% of the variance, and factors 7, 8, and 9 each explained 3%. Oblimin rotation is a general form for obtaining oblique rotations used to transform vectors associated with principal component analysis or factor analysis to simple structure (Jackson, 2005). By using an oblimin rotation, the cross-loadings between items can be minimized. Factors 4 to 9 were examined, using varimax and oblimin rotations of the factor loading matrix. Additionally, the scree plot suggested looking at the first three factors. The first three factor solutions explained 38% of the variance and was chosen because the leveling off of eigen values on the scree plot after three factors, and the insufficient number of primary loadings and difficulty of interpreting the fourth factor and the rest of the factors. There is hardly any difference between the varimax and oblimin solutions.

Therefore, after several steps, a total of 13 items were removed from the student-faculty interactions list because they either did not contribute to a simple factor loading of .5 or above, or no cross-loading of .5 or above, or there were really not enough primary loadings on some factors to justify their presence. For example, the items, “I feel it is very easy get to know faculty,” “It is easy for students to see faculty outside of regular office hours,” and “I can
understand what my professors expect of me academically” were not correlated to other items.

A principle-components factor analysis of the remaining 25 items, using varimax and oblimin rotations got similar percentage of variance. An oblimin rotation provided the best-defined factor structure. All items had primary loadings over .5.

**Labels of the Factors**

The factor labels were based on the extracted items. The internal consistency was run and the Cronbach’s alpha was .86. Finally three factors were pulled out from these 25 items for the student survey. Composite scores were created for each of the three factors, based on the mean of the items that had their primary loadings on each factor.

**Faculty experience of student-faculty interactions.** From faculty perceptions of student-faculty interactions, there was a slightly different factor structure. Sets of items were analyzed to construct these relationships. Three factors were ultimately selected as the most useful for this study. Two factors were very similar to student factors. The first set, Forms of Interactions, consisted of six items in which faculty assessed the forms of their interactions with students. These items described different quality of student-faculty interactions that happened in the university. These forms included: discussed course-related topic with students, helped students with their writing, discussed with students their career plans, etc. The second factor, Quantity of Interactions, asked faculty to respond to a set of questions on quantity of their interactions; that is, how much time they spent in and outside of office time, and responding to students’ email. The third factor was Overall Satisfaction of Interactions. Three items were included: satisfaction with VCU on quality of contact with students, satisfaction with VCU on amount of contact with students, and satisfaction with VCU on overall quality of instruction.
Factors as reported by faculty.

1. Quality of Student-Faculty Interactions: 6 items
2. Quantity of Student-Faculty Interactions: 3 items
3. Overall Satisfaction of Interactions: 3 items

Student experience of student-faculty interactions. Students had a similar understanding of student-faculty interactions. Items related to aspects of the student-faculty relationships were put together to do factor analysis. Three factors were selected as the most useful for this study. The Quality of Interactions encompassed 13 items in which students rated their forms of interactions with faculty, faculty’s accessibility cues, and evaluated VCU’s overall quality of interactions.

To sum up, the students were asked to evaluate or rank their experience regarding items about their opinion toward VCU faculty, the forms of interactions, and quality of instruction. The Quality of Student-Faculty Interactions included 12 items in three categories: overall satisfaction of quality of contact with faculty, amount of contact with faculty, quality of instruction; the accessibility cues of faculty—the factor consisted of two items, “I feel it is very easy get to know faculty,” and “Faculty is interested in students' personal problems”; forms of interactions—the factor was composed of 6 items: received prompt written or oral feedback on my academic performance; discussed my career plans and ambitions with faculty; discussed my academic program or course selection with my faculty; VCU faculty will match instruction to these learning styles; talked with my faculty about information related to a course I was taking (grades, make-up work, assignments, etc.); and discussed ideas for a term paper or other class project with faculty.
The Quantity of Student-Faculty Interactions described the degree to which students were involved in interacting with faculty. It included three items: how much time students/faculty spent to meet faculty/students in classroom, outside of class, and contacted their faculty members by email. The third factor, Faculty Socialization, referred to the aspects of relationship other than contact with faculty in office hours. It was also composed of three items in which faculty were asked interactions that were outside of class setting. It consisted of being a guest in faculty member’s house, socializing with a faculty member, and discussing ideas outside of class.

To summarize, based on the results of factor analysis, there were two different sets of factors for student-faculty interactions from student and faculty perspectives. The individual factor loadings from both student and faculty strands ranged from .5 to .78 for the entire sample, and the factor held together well across these two groups under investigation, with the Cronbach’s alpha value ranging from .86 for students to .79 for faculty. The acceptable cutoff values were above .5.

**Factors as reported by students.**

4. Quality of Student-Faculty Interactions: 13 items
5. Quantity of Student-Faculty Interactions: 3 items
6. Faculty Socialization: 3 items

Generally speaking, these analyses identified that three distinct factors were underlying students’ responses and faculty members’ responses to the student-faculty interactions items and that these factors were internally consistent. Altogether 13 items were removed. An approximately normal distribution was evident for the composite score data in the current study, thus the data were good for parametric statistical analysis.
Next, a t-test was used for comparing White and Asian student/faculty to determine if race was the strongest predictor for positive student-faculty interactions. The t-test was used to compare the group means on the White students’ experiences of the student-faculty relationships and the Asian students groups. A set of t-tests was used to compare the means of every single item of each factor of the student-faculty interactions. The purpose was to see clearly the ways in which White faculty and Asian faculty/students differ in their understanding and behavior of student-faculty relationship. For faculty, t-tests were run to see if White and Asian faculty were different in Forms of Interactions, Quantity of Interactions, and Overall Satisfaction. For students, t-test were performed to see if White and Asian students are different in Quality of Interactions, Quantity of Interactions and Faculty Socialization.

**Contribution of the Study**

Over the last 30 years quality of student-faculty interactions have been empirically measured with little variation. The confounding nature of student characteristics, such as gender and race/ethnicity, however, was often overlooked as issues affecting these interactions in these studies. Most research demonstrating the impact of student-faculty interactions on educational gains, student GPA, or student intellectual development only used race/ethnicity as a student background characteristic or control variable. Therefore, the effects of race for student or faculty were underestimated and can only be answered significant or not significant to student-faculty contact. However, this research had focused on race across students and faculty student-faculty interactions. That is, race was determined as a dominant issue in this study. In this case, the study can reveal little more than only significant or not significant of race/ethnicity in understanding student-faculty contact. When race as a main factor was examined in the study, how or why race/ethnicity, or what factor was important in developing and maintaining student-
faculty contact became the main concern, not whether or not race was significant regarding these interactions. Moreover, unlike their Latino/a and African American counterparts, Asian American students have fewer studies exclusively examining the impact of these interactions on their educational gains and satisfaction. Although when considered as one of many racial/ethnic groups (i.e., African-American, Latino/a, and White students), Asian American students usually reported smaller numbers of interactions with faculty (Kuh & Hu, 2001).

Because the quality and quantity nature of these interactions were likely to differ across students’ racial/ethnic groups (Allen, Epps, & Haniff, 1991; Cole, 1999, 2000, 2007), the main purpose of this study was to examine the nature of Asian American student interactions with White/Asian faculty by using Whites as a comparison peer group. So a strength of this study was the focus exclusively on the Asian group.

The major contribution for this study is that I may have shed some light on the study of Asian students at college level and aligned measures of student-faculty contact with the theoretical foundation—Tinto’s theory of integration (1987, 1993). By integrating perspectives from theories of Tinto (1987, 1993), this study explored a conceptualization of different-race, student-faculty interactions based on combined quality, quantity, and academic and social integration of student-faculty interactions, and contrasted it with a more traditional, general oriented student-faculty conceptualization. Separate investigations of Asian American students that specifically examine their interactions with same/different race faculty, and the effects on their educational learning, perceptions and achievement were rarely conducted.

Moreover, most models of student-faculty interactions are based on predominantly White student samples (Astin, 1984, 1993; Tinto, 1993) and at predominantly White institutions (Allen, 1992; Cole & Jackson, 2005, Davis, 1991); however, some studies have been conducted at
historically Black colleges and universities (Fleming, 1984). There are relatively fewer studies that have been conducted at diverse universities. This study chose VCU as the sample site to see if there are relationships between interactions with teachers and students’ academic success and perceptions.

Another contribution of my study is that I found some good practices in undergraduate education to demonstrate somewhat stronger impacts on student development of awareness and acceptance to diversity. My findings also provide additional evidence to the ongoing national debate over what constitutes good student-faculty interactions in undergraduate education and the strongly shaped public notions of that Asian students are highly represented race.

To the extent that the student-faculty interactions that are shaped by students’ various races, perceptions, experiences during college, this study aimed to provide insights into how student-faculty interactions might be addressed for Asian American undergraduates in particular.

Delimitations and Limitations

First, the Asian American population is quite diverse with ethnic, social class, and immigrant subgroups that encounter different social and institutional experiences (Gomez & Teranishi, 2001; Hurtado et al., 1997; McDonough & Antonio, 1996; Teranishi et al., 2001). However, in this study, owing to limited Asian American population availability at VCU, instead of entering upon the differences that were evident in postsecondary outcomes of different Asian American ethnic subpopulations, Asian American students/faculty were referred to as one group. Hence, the aggregated data on Asian American may homogenize the experiences of Asian Americans and depict a distorted picture of the educational experience for both Asian faculty and students. The homogeneity of different Asian subgroups may camouflage the realities of their uniqueness.
Secondly, since only one university was used as the sample, it may have influenced the generalization and representation of this study. The proportion of enrollment comprised of students and faculty from different Asian American ethnic subgroups ranges widely and the demographics of Asian students and faculty vary dramatically. For example, in 1984, at the University of California, Berkeley campus, Whites represented over 70% of the population. Six years later, this proportion had dropped to fewer than 60% (Antonio, 1991a). Until 2006, Asian Americans as a whole represented nearly 40% of the total enrollment. However, in the east and central parts of America, the Asian representation was far less than that. Therefore, results for the proposed study may not be generalized to every state in the United States because of the different percentage of the Asian American student population. Only one university situation cannot represent the whole picture of Asian Americans in higher education. Additionally the sample size was not large enough for both the Asian American student and faculty population. Moreover, although a large number of the items on this survey were the same or very similar to the CIRP Freshman Survey, YFCY, NSSE and CSEQ, it is safe to assume that most of the information provided in those surveys applies to this survey as well. However, the primary difference was that the margins of error were likely to be slightly larger due to the considerably smaller sample sizes because I only used one university as the sample site.

Finally, because the topic of this study was about race, it was probably rather sensitive for many people. Consequently, limitations of the study may also include possible low response rate, incomplete surveys, social desirability, and participant bias due to the topic and the fact that this survey was conducted via the Internet. It may be difficult to test students/faculty’s authentic thoughts about racism and discrimination. Both students and faculty may or may not have been inclined to reveal themselves in a positive and appealing way. Additionally, survey fatigue may
have been a factor because participants were asked to complete more than 50 items and questions. These combined challenges may possibly explain why an extensive literature review uncovered so few references on the topic.

In conclusion, this study focused on the educational experiences of Asian Americans as a whole. The limitation was that there was less known about the educational experiences of ethnic subgroups within the population because Asian American groups were also faced by diverse population of recent immigrants, refugees, and other at-risk Asian American youth (Kim, 1983; Lee, 1994, Nakanishi, 1995; Ong, 2000; Sue & Okazaki, 1990; Takagi, 1992). The Asian American population may be misrepresented through being categorized and treated as a single, homogeneous racial group (Hune & Chan, 1997; Teranishi, 2002a).

Future research may need to be conducted to examine Asian Americans to reveal this special, actually quite diverse group with clarification of subgroups of this population. The different subgroups may have different social and institutional experiences (Teranishi, 2002b). At the same time, if possible, whether the Asian American students are first, second, or third generation, may need to be identified in future research because students’ educational experience may relate to their language proficiency.

According to some qualitative studies, Asian American students relate how class biases in accents and speech patterns, disrespect their intellect, research interests, and other contributions. They have consistently spoken out about their marginalization by faculty and other staff. So language proficiency can be a potential factor that needs to be considered to influence Asian American students’ experience.
CHAPTER 4. RESEARCH FINDINGS

Introduction

The Student-Faculty Interaction Surveys were sent to a randomly selected sample of faculty and undergraduate students on April 30, 2010, and every 2 weeks thereafter to those who had not responded to the survey. Because of the low response rate from the Asian faculty, a third email reminder was sent, specifically to the Asian faculty in September, 2010. This faculty survey was targeted toward full-time faculty members only. One thousand-eighteen White faculty members were randomly selected and all 140 VCU Asian faculty members were invited to participate in the web survey, which received a return rate of 33.5% (n = 388) after the initial survey and two email reminders. Upon the third email reminder to the Asian faculty, the overall return rate was 34.6% (n = 401), with a low response rate from Asian faculty (17.9%, n = 25).

Student survey participation was restricted to undergraduate students who matriculated at/before fall 2009 at VCU. These surveys were sent to 1,113 White undergraduate students and 990 Asian students with a 24.1% (n = 509) response rate.

As mentioned in Chapter 3, after distributing surveys and collecting data, I performed a factor analysis on student-faculty interactions items, which resulted in three factors from the student survey and three factors from the faculty survey, respectively.

The purpose of this chapter is to present findings acquired from the student and faculty web surveys.
Research Analyses and Findings

Research Question 1

Are there differences by race in perceptions of student-faculty interactions (a) as reported by students, (b) as reported by faculty?

**Student experience of student-faculty interactions.** Survey responses from students resulted in three factors related to student-faculty interactions:

1. Quality of Student-Faculty Interactions
2. Quantity of Student-Faculty Interactions
3. Faculty Socialization

For each factor, a t-test was used to compare White and Asian student responses, with the $p$ value set at .05. As can be seen in Table 1, there were no differences by race in any of these three student-faculty interactions factors.

Table 1

*Differences Between Student Race and Student-Faculty Interactions*

<table>
<thead>
<tr>
<th>Student response</th>
<th>White vs. Asian</th>
<th>M</th>
<th>T</th>
<th>$p$</th>
<th>Eta squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Quality of interactions</td>
<td>White: 2.60</td>
<td>2.10</td>
<td>.15</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asian: 2.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2: Quantity of interactions</td>
<td>White: 2.50</td>
<td>2.48</td>
<td>.12</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asian: 2.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3: Faculty socialization</td>
<td>White: 1.27</td>
<td>.12</td>
<td>.73</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asian: 1.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Even though there were no differences by race, I further explored Factor 2 because I am particularly interested in quantity of student-faculty interactions and wished to understand this factor in more detail.

As can be seen in Table 2, White students on average spent 2.17 hours a week meeting with a faculty member during office hours; 1.84 hours meeting with a faculty member outside of class or office hours; and nearly 3.5 hours emailing their faculty members. Asian students spent 2.5 hours, 2 hours, and 3.71 hours each week on these activities, respectively.

Table 2

*Student Report on Quantity of Student-Faculty Interactions*

<table>
<thead>
<tr>
<th>Student response</th>
<th>Meet a faculty member during office hours</th>
<th>Meet a faculty member outside of class or office hours</th>
<th>Communicating via email with a faculty member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.50</td>
<td>2.01</td>
<td>3.71</td>
</tr>
<tr>
<td>N</td>
<td>129</td>
<td>129</td>
<td>129</td>
</tr>
<tr>
<td>Std. deviation</td>
<td>1.56</td>
<td>1.46</td>
<td>2.18</td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.17</td>
<td>1.84</td>
<td>3.49</td>
</tr>
<tr>
<td>N</td>
<td>183</td>
<td>183</td>
<td>183</td>
</tr>
<tr>
<td>Std. deviation</td>
<td>1.25</td>
<td>1.07</td>
<td>1.97</td>
</tr>
<tr>
<td>$t$</td>
<td>4.07</td>
<td>1.44</td>
<td>.82</td>
</tr>
<tr>
<td>$p$</td>
<td>.04</td>
<td>.23</td>
<td>.37</td>
</tr>
<tr>
<td>Eta squared</td>
<td>.01</td>
<td>.00</td>
<td>.00</td>
</tr>
</tbody>
</table>
Both White and Asian students use email to communicate with faculty members. Among the three questions that made up the quantity factor, there was only one statistically significant difference (meeting a faculty member during office hours, \( p = .04 \)). However, this was not a meaningful difference between White and Asian students (Eta Squared = .01).

**Faculty experience of student-faculty interactions.** Survey responses from faculty members also resulted in three factors:

1. Quality of Student-Faculty Interactions
2. Quantity of Student-Faculty Interactions
3. Overall Satisfaction with Students

As can be seen in Table 3, considering all three factors that composed student-faculty interactions, there exists only one statistically significant difference. However, there was no meaningful relationship between faculty race and student-faculty interactions (Eta squared = .03).

Table 3

*Differences Between Faculty Race and Student-Faculty Interactions*

<table>
<thead>
<tr>
<th>Faculty response White vs. Asian</th>
<th>M</th>
<th>T</th>
<th>( p )</th>
<th>Eta squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Quality of interactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White:</td>
<td>2.85</td>
<td>7.31</td>
<td>.01</td>
<td>.03</td>
</tr>
<tr>
<td>Asian:</td>
<td>2.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2: Quantity of interactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White:</td>
<td>2.28</td>
<td>N/A</td>
<td>.97</td>
<td>.00</td>
</tr>
<tr>
<td>Asian:</td>
<td>2.28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3: Faculty socialization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White:</td>
<td>3.06</td>
<td>.09</td>
<td>.76</td>
<td>.00</td>
</tr>
<tr>
<td>Asian:</td>
<td>3.03</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4 indicates that both White faculty and Asian faculty use email to communicate with students. Each week, White faculty on average spent 2.12 hours meeting with students during office hours; 2.06 hours meeting with students outside of class or office hours; and 2.65 hours emailing students. While each week Asian faculty spent 2.4 hours, 2.04 hours, and 2.4 hours, respectively.

Table 4

*Faculty Report on Quantity of Student-Faculty Interactions*

<table>
<thead>
<tr>
<th>Student response</th>
<th>Meet with students during office hours</th>
<th>Meet with students outside of class or office hours</th>
<th>Communicating via email with students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.40</td>
<td>2.04</td>
<td>2.40</td>
</tr>
<tr>
<td>N</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Std. deviation</td>
<td>1.00</td>
<td>.54</td>
<td>.82</td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.12</td>
<td>2.06</td>
<td>2.65</td>
</tr>
<tr>
<td>N</td>
<td>203</td>
<td>203</td>
<td>203</td>
</tr>
<tr>
<td>Std. deviation</td>
<td>.77</td>
<td>.78</td>
<td>1.05</td>
</tr>
<tr>
<td>$t$</td>
<td>2.75</td>
<td>.01</td>
<td>1.31</td>
</tr>
<tr>
<td>$p$</td>
<td>.09</td>
<td>.91</td>
<td>.25</td>
</tr>
<tr>
<td>Eta squared</td>
<td>.01</td>
<td>.00</td>
<td>.01</td>
</tr>
</tbody>
</table>
Even though there were statistically significant differences, there were no meaningful differences by faculty race in Factor 1 quality of interactions. I explored the differences in the responses to individual survey questions by race/ethnicity.

As can be seen in Table 5, there were only three statistically significant differences on individual questions in the quality of interactions in faculty survey, and they were not meaningful with Eta Square from .02 to .03. Therefore, there was no difference by race in quality of student-faculty interactions among faculty members.

Table 5

*Quality of Interactions With Students That are Significant Across Faculty Race*

<table>
<thead>
<tr>
<th>Faculty quality of interactions with students that are significant</th>
<th>White vs. Asian</th>
<th>M</th>
<th>T</th>
<th>p</th>
<th>Eta squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss with students their academic program or course selection.</td>
<td>White: 2.86</td>
<td>6.08</td>
<td>.01</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asian: 2.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help students improve their writing.</td>
<td>White: 2.88</td>
<td>6.75</td>
<td>.01</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asian: 2.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talk with students about information related to a course they are taking.</td>
<td>White: 3.20</td>
<td>5.58</td>
<td>.02</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asian: 2.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Summary of Research Question 1**

There were no differences by race in student-faculty interactions as reported by students and faculty.
Research Question 2

What are the relationships of race and student-faculty interactions on students’ academic achievements?

The dependent variable in Research Question 2 measured student learning/GPA. Student GPA was regressed on the independent variables using multiple linear regression. Missing data were adjusted using deleted Pairwise. SPSS will include all available data. Pairwise deletion is a method of dealing with missing data in that it deals with the missing data before any substantive analyses are done (Carter, 2006). The reason to use Pairwise deletion is because: (a) it is a common method for dealing with missing data in most statistical software packages (Allison, 2001; Olinsky, Chen, & Harlow, 2003); (b) it is considered one of the easiest and simplest methods of dealing with missing data (Brown, 1983); (c) unlike listwise deletion that often deletes a large fraction of the sample, pairwise deletion leads to a less severe loss of statistical power; (d) I can maximize the use of available information; and (e) considering the rather small sample size of my study, and number of variables may result in a great reduction in the sample size available for data analysis if I use listwise deletion, thus I decided to use pairwise deletion for student survey.

The surveys were sent to 2,103 students and 1,158 faculty members and the sample size was 263 valid faculty and 393 student participants. There were 180 out of 366 faculty members who could not complete the survey. The main reason, according to their email, was that they only teach graduate students and do not have experience with undergraduate students. Because the VCU email list could not indicate if a faculty member worked on the Monroe campus, the MCV campus, or the medical center, many of the faculty members were from the MCV campus.
and taught only graduate students who received this web survey. The actual missing data were 69 out of 509 participants.

The independent variables, which included Race, Quality of Student-Faculty Interactions, Quantity of Student-Faculty Interactions, and Faculty Socialization, were entered to capture the unique contributions to the total variance explained by each of the four variables.

Once all measures were inspected and confirmed through missing data and factor analyses, separate multiple regression analyses were run for student groups, comparing the unstandardized beta coefficients to determine the strongest predictors, as well as predicting the variability of dependent variables (student GPA) that were explained by the variability of all the independent variables.

The second question examined the relationships of Race, Quality of Student-Faculty Interactions, Quantity of Student-Faculty Interactions, and Faculty Socialization with student GPA. Students’ GPA was measured by a self-report item on a 4-point scale ranging from A = 4, B = 3, C = 2, to D = 1.

The equation was: \[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + E \]

Where \( Y \) = student GPA

\( a \) or Alpha = a constant

\( X_1 \) = student race

\( X_2 \) = Factor 1: Quality of Student-Faculty Interactions

\( X_3 \) = Factor 2: Quantity of Student-Faculty Interactions

\( X_4 \) = Factor 3: Faculty Socialization

\( e \) = error
Table 6 is a model summary of R Square change of the four independent variables on student GPA. As can be seen in Table 6, only Factor 1, the Quality of Student-Faculty Interactions is statistically significant on student GPA. Other three factors, none of the variables in the regression equation added meaningful explanatory power. To sum up, all of the variables combined only explained 7% of the variance of student GPA.

Table 6

*Model Summary: R Square Change of the Four Independent Variables on GPA*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R square</th>
<th>Adjusted R square</th>
<th>Std. error of the estimate</th>
<th>R square change</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Quality of interactions</td>
<td>.26</td>
<td>.07</td>
<td>.07</td>
<td>.70</td>
<td>.07</td>
<td>.00</td>
</tr>
<tr>
<td>Factor 1 + 2: Quality + Quantity of interactions</td>
<td>.26</td>
<td>.07</td>
<td>.06</td>
<td>.70</td>
<td>.00</td>
<td>.91</td>
</tr>
<tr>
<td>Factor 1 + 2 + 3: Quality + Quantity of interactions + Faculty socialization</td>
<td>.28</td>
<td>.08</td>
<td>.07</td>
<td>.70</td>
<td>.01</td>
<td>.10</td>
</tr>
<tr>
<td>3 Factors + Race: Quality + Quantity interactions + Faculty socialization + Race</td>
<td>.29</td>
<td>.08</td>
<td>.07</td>
<td>.70</td>
<td>.00</td>
<td>.34</td>
</tr>
</tbody>
</table>

*a Predictors: (Constant), quality of interactions.

*b Predictors: (Constant), quality of interactions, quantity of interactions.

*c Predictors: (Constant), quality of interactions, quantity of interactions, socialization.

*d Predictors: (Constant), quality of interactions, quantity of interactions, socialization, race/ethnicity.

Table 7 displays the coefficients of Race, Quality of Student-Faculty Interactions, Quantity of Student-Faculty Interactions, Faculty Socialization, and Student GPA. Only Quality of Student-Faculty Interactions and student GPA are positively related. To the extent Quality of
Student-Faculty Interactions, not Quantity of Interactions is actually related to the effectiveness
of the undergraduate education it provides, the existing evidence and findings suggest that it
probably makes more sense to focus on implementing interactions with faculty members than on
how long to interact with faculty members.

Table 7

*Model Summary of the Multiple Regression on Student GPA*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model B</td>
<td>B</td>
<td>Std. error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.34</td>
<td>.21</td>
</tr>
<tr>
<td>Factor 1: Quality interactions</td>
<td>.03</td>
<td>.01</td>
</tr>
<tr>
<td>Factor 2: Quantity interactions</td>
<td>.00</td>
<td>.01</td>
</tr>
<tr>
<td>Factor 3: Faculty socialization</td>
<td>-.06</td>
<td>.04</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td>-.10</td>
<td>.08</td>
</tr>
</tbody>
</table>

Note. Dependent variable: GPA

Table 7 also indicates a negative correlation of Faculty Socialization and Student GPA
(Beta = -.11), which means the more social activities students have with faculty members, the
lower their GPA.

**Summary of Research Question 2**

There is no relationship between any of the independent variables (Race, Quality of
Student-Faculty Interactions, Quantity of Student-Faculty Interactions, Faculty Socialization)
and student GPA.
Research Question 3

What are the relationships of race, student-faculty interactions and students’ multicultural perceptions?

The third question examined the relationships of Race, Quality of Student-faculty Interactions, Quantity of Student-Faculty Interactions, Faculty Socialization and student Multicultural Perceptions.

The dependent variable in Research Question 3 measured students’ perceptions on multiculturalism. The dependent variable was regressed on the independent variables using multiple linear regression. Students’ multiculturalism was measured in perspectives of student openness, tolerance, and opinions toward multiculturalism and diversity. The four independent variables—Race, Quality of Student-Faculty Interactions, Quantity of Student-Faculty Interactions, Faculty Socialization, were entered to capture the unique contributions to the total variance of the dependent variable explained by each of the four variables.

After all measures were inspected and confirmed through missing data and factor analyses, a separate multiple regression analysis was run for student groups, comparing the unstandardized beta coefficients to determine the strongest predictors, as well as predicting the variability of students’ multicultural perceptions that were explained by the variability of all the independent variables (race and student-faculty interactions).

The equation was: \[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + E \]

Where \( Y \) = student multicultural perceptions

\( a \) or Alpha = a constant.

\( X_1 \) = Student Race

\( X_2 \) = Factor 1: Quality of Student-Faculty Interactions
As can be seen in Table 8, only Factor 1, the Quality of Student-Faculty Interactions had a relationship with multicultural perceptions ($r^2 = .18$). Factor 1 accounted for 18% of the variance of student multicultural perceptions. Other variables in the regression equation did not contribute to the explanation of the variance of the dependent variable. The finding in Table 8 also indicates that Quantity of Student-Faculty Interactions and Faculty Socialization had no additional relationship by race to student Multicultural Perceptions.

Table 8

**Model Summary of R Square Change on Students' Multicultural Perceptions**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R square</th>
<th>Adjusted R square</th>
<th>Std. error of the estimate</th>
<th>R square change</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Quality interactions</td>
<td>.42</td>
<td>.18</td>
<td>.18</td>
<td>3.53</td>
<td>.18</td>
<td>.00</td>
</tr>
<tr>
<td>Factor 1 + 2: Quality + Quantity of interactions</td>
<td>.42</td>
<td>.18</td>
<td>.17</td>
<td>3.54</td>
<td>.00</td>
<td>.48</td>
</tr>
<tr>
<td>Factor 1 + 2 + 3: Quality + Quantity of interactions + Faculty socialization</td>
<td>.42</td>
<td>.18</td>
<td>.17</td>
<td>3.55</td>
<td>.00</td>
<td>1.12</td>
</tr>
<tr>
<td>3 Factors + Race: Quality + Quantity of interactions + Faculty socialization + Race</td>
<td>.42</td>
<td>.18</td>
<td>.17</td>
<td>3.55</td>
<td>.00</td>
<td>1.96</td>
</tr>
</tbody>
</table>

*a* Predictors: (Constant), quality of interactions.

*b* Predictors: (Constant), quality of interactions, quantity of interactions.

*c* Predictors: (Constant), quality of interactions, quantity of interactions, socialization.

*d* Predictors: (Constant), quality of interactions, quantity of interactions, socialization, race/ethnicity.
Table 9 displays coefficients of Race, Quality of Student-Faculty Interactions, Quantity of Student-Faculty Interactions, Faculty Socialization, and student Multicultural Perceptions.

Table 9

*Summary of the Four Independent Variables on Students' Multicultural Perceptions*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>10.00</td>
<td>1.07</td>
</tr>
<tr>
<td>Factor 1: Quality</td>
<td>.26</td>
<td>.04</td>
</tr>
<tr>
<td>interactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2: Quantity</td>
<td>-.04</td>
<td>.05</td>
</tr>
<tr>
<td>interactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3: Faculty</td>
<td>-.09</td>
<td>.18</td>
</tr>
<tr>
<td>socialization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td>.07</td>
<td>.41</td>
</tr>
</tbody>
</table>

Note. Dependent variable: Student multicultural perceptions.

Because Factor 2 and Factor 3 did not contribute to predicting multicultural perceptions, a bivariate correlation was further conducted (see Table 10). The relationship of Factor 1 and student Multicultural Perceptions is: \( r = .42; P < .01; n = 331 \).

Table 10

*Correlations Between Quality of Interactions and Students' Multicultural Perceptions*

<table>
<thead>
<tr>
<th>Correlations</th>
<th>( p )</th>
<th>Pearson correlation</th>
<th>R squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1: Quality of interactions and dependent variable: Multicultural perceptions</td>
<td>.00</td>
<td>.42*</td>
<td>.18</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed).
Table 11 indicates the variable, Quality of Student-Faculty Interactions that contributes to student Multicultural Perceptions by student race. There were no differences by race in terms of student multicultural perceptions.

Table 11

*Quality of Student-Faculty Interactions and Students' Multicultural Perceptions by Student Race*

<table>
<thead>
<tr>
<th>Student response</th>
<th>Factor 1: Quality of interactions</th>
<th>Dependent variable: Multicultural perceptions</th>
<th>Pearson correlation of factor 1 and multicultural perceptions</th>
<th>R squared of factor 1 and multicultural perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian Mean</td>
<td>2.51</td>
<td>2.99</td>
<td>.41</td>
<td>.17</td>
</tr>
<tr>
<td>N</td>
<td>129</td>
<td>129</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Std. deviation</td>
<td>.48</td>
<td>.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Mean</td>
<td>2.60</td>
<td>3.05</td>
<td>.42</td>
<td>.18</td>
</tr>
<tr>
<td>N</td>
<td>183</td>
<td>183</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Std. deviation</td>
<td>.52</td>
<td>.65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Correlation is significant at the 0.01 level (2-tailed).

**Summary of Research Question 3**

Student experience of student-faculty interactions on Quality of Student-Faculty Interactions indicated a moderate positive correlation \((r = .42, r^2 = .18)\) to Multicultural Perceptions, which suggests the better the quality of student-faculty interactions, the higher the level of multicultural perceptions for both White and Asian students.
Extra Findings: Different Definitions of Student-Faculty Interactions by Faculty/Student and by Race

Differences in faculty and student perceptions. When I examined perceptions of student-faculty interactions, I found the student definition of student-faculty interactions different from the faculty definition.

As reported by students, student-faculty interactions are composed of three aspects:

1. Quality of Student-Faculty Interactions
2. Quantity of Student-Faculty Interactions
3. Faculty Socialization

By comparison, survey responses from faculty members also resulted in three factors, but only the content of Factor 2, Quantity of Interactions, is the same as the student response. Students and faculty conceptualized additional factors differently, with both believing their components defined student-faculty interactions.

Students’ definitions and understanding of student-faculty interactions cover a wider range and different aspects than do faculty definitions. The area of student-faculty interactions consists of three factors. Quality of student-faculty interactions, according to students, include:

1. Received prompt written or oral feedback on my academic performance.
2. Discussed my career plans and ambitions with faculty.
3. Discussed my academic program or course selection with my faculty.
4. Talked with my faculty about information related to a course I was taking (grades, make-up work, assignments, etc.).
5. Discussed ideas for a term paper or other class project with faculty.
6. I feel it is very easy to get to know faculty.
7. Faculty here is strongly interested in the academic problems of undergraduates.

8. Faculty is interested in students' personal problems.

9. VCU faculty will match instruction to these learning styles.

10. Satisfaction of quality of contact with faculty.

11. Satisfaction of amount of contact with faculty.

12. VCU overall quality of instruction.

The questions from student surveys suggest that students may regard student-faculty interactions as a wider concept. Students think not only the types of interactions but also faculty attitudes toward students, and students’ overall satisfaction is important.

As for faculty, perception of what constitutes quality of student-faculty interactions (Faculty Factor 1), faculty see it as one factor and only about students.

1. Discussed with students their academic program or course selection.

2. Discussed with students their ideas for a term paper or other class project.

3. Helped students improve their writing.

4. Discussed with students their career plans and ambitions.

5. Talked with students about information related to a course they were taking (grades, make-up work, assignments, etc.).

6. Discussed ideas from students' readings or classes outside of class.

As can be seen in Table 12, for students the factor, Quality of Student-Faculty Interactions, includes 12 items. For faculty, the quality factor includes only six items. Table 12 compares definitions of student-faculty interactions from student and faculty members.
Table 12

*Differences in Faculty and Student Understanding of Student-Faculty Interactions*

<table>
<thead>
<tr>
<th>Student definition of student-faculty interactions</th>
<th>Faculty definition of student-faculty interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1. Quality of student-faculty interactions</strong></td>
<td></td>
</tr>
<tr>
<td>Satisfaction of quality of contact with faculty.</td>
<td>X</td>
</tr>
<tr>
<td>Satisfaction with amount of contact with faculty.</td>
<td>X</td>
</tr>
<tr>
<td>VCU overall quality of instruction.</td>
<td>X</td>
</tr>
<tr>
<td>I feel it is very easy to get to know faculty.</td>
<td>X</td>
</tr>
<tr>
<td>Faculty here is strongly interested in the academic problems of undergraduates.</td>
<td>X</td>
</tr>
<tr>
<td>Received prompt written or oral feedback on my academic performance.</td>
<td>X</td>
</tr>
<tr>
<td>Discussed by career plans and ambitions with faculty.</td>
<td>Discussed my career plans and ambitions with students.</td>
</tr>
<tr>
<td>Faculty is interested in students' personal problems.</td>
<td>X</td>
</tr>
<tr>
<td>Discussed my academic program or course selection with my faculty.</td>
<td>Discussed my academic program or course selection with my students.</td>
</tr>
<tr>
<td>VCU faculty will match instruction to these learning styles.</td>
<td>X</td>
</tr>
<tr>
<td>Talked with my faculty about information related to a course I was taking (grades, make-up work, assignments, etc.)</td>
<td>Talked with my students about information related to a course I was taking (grades, make-up work, assignments, etc.)</td>
</tr>
<tr>
<td>Discussed ideas for a term paper or other class project with faculty.</td>
<td>Discussed ideas for a term paper or other class project with students.</td>
</tr>
</tbody>
</table>
Table 12 - continued

<table>
<thead>
<tr>
<th>Student definition of student-faculty interactions</th>
<th>Faculty definition of student-faculty interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Helped students improve their writing.</td>
</tr>
<tr>
<td>X</td>
<td>Discussed ideas from students' readings or classes outside of class.</td>
</tr>
</tbody>
</table>

**Factor 2. Quantity of student-faculty interactions**

Meet a faculty member during office hours.  
Meet students during office hours.  
Meet a faculty member outside of class or office hours.  
Meet students outside of class or office hours.  
Communicating via email with a faculty member.  
Communicating via email with students.

**Factor 3. Faculty socialization (students)**

Socialized with faculty outside of class (had a snack or soft drink, etc.)  
Discussed ideas from my readings or classes with faculty members outside of class.  
Was a guest in faculty member's home.

**Factor 3. Overall satisfaction (faculty)**

Satisfaction with VCU on quality of contact with students.  
Satisfaction with VCU on amount of contact with students.  
Satisfaction with VCU on overall quality of instruction.
As can be seen from Table 12, the definitions of students and faculty of the student-faculty interactions are different. Most importantly, my research shows that students include a wider view of student-faculty interactions, such as discussing a grade, asking for help on a paper, reviewing materials that will be on an examination, or perhaps even building a relationship with a faculty member, but also extends to other aspects such as faculty attitude. In other words, how do faculty members feel or what are they thinking about when they are relating to the students, do they care about students’ personal life, do they have a negative attitude toward a specific student or students?

The students’ definition of student-faculty interactions not only cover faculty definition of quality of student-faculty interactions, but extend to other aspects: (a) accessibility clues of faculty, such as faculty attitude toward students, do they care about students, are they interested in students’ personal life, etc; and (b) overall satisfaction of faculty, such as advising of faculty, and the quality of instruction. The faculty’s understanding of student-faculty interactions include only the items that are directly related to the forms of direct student interactions: helping students with their writing, giving them suggestions on course work, etc.

**Differences in Definition of Student-Faculty Interactions by Faculty Race**

The initial part of the study examined factors for both faculty and students using student definitions. However, it seems relevant to examine whether there are differences in the constitution of the factors by race.

When I examined the factor components by race, I found that White faculty defined the factors different than Asian faculty. One salient difference between White faculty and Asian faculty is, in addition to the common aspects of quality and the overall satisfaction of student-faculty interactions, Asian faculty is more culturally sensitive to different teaching and student
learning styles and they pay more attention to equitable issues. For example, for the item, “In some cultures, students are embarrassed to speak in front of others so I take this into account and don't call on these students in class,” only Asian faculty report that they adjust their teaching based on students’ cultural background. Items “I think interacting with undergraduate students has been a source of stress for me,” and “Good teachers will match their instruction to students of different learning styles,” appeared only in Asian faculty’s definition of interactions, which indicate that Asian faculty is more willing to tailor their teaching to students of different learning styles and from different cultural backgrounds. Moreover, Asian faculty is likely to address equitable issues on campus. For example, Asian faculty thinks “A racially/ethnically diverse faculty body enhances the educational experience of all students”; they are against “I have felt discriminated against from students based on my race/ethnicity”; and they do not think, “In class, I have heard students' stereotypes about my race/ethnicity.” White faculty do not think items that are associated with race/discrimination/equity are part of student-faculty interactions. Tables 13, 14, and 15 present the different definitions of the student-faculty interactions by White and Asian faculty, respectively.

For White faculty there are only seven components of Quality of Student-Faculty Interactions, while for Asian faculty, there are 13. Asian faculty members are not likely to discuss with students their career plans and ambitions, however, they work with students on their research projects, and they work with students on things beyond the coursework.

For White faculty, there are three components related to their satisfaction of student-faculty interactions: quality and quantity of student-faculty interactions, and the quality of instruction; while for Asian faculty, they are also satisfied with their accessibility cues (easy to know) and their adjustment of instruction.
Table 13

*Faculty Definition of Quality of Student-Faculty Interactions by Race*

<table>
<thead>
<tr>
<th>White Faculty</th>
<th>Asian Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1. Quality of student-faculty interactions</strong></td>
<td></td>
</tr>
<tr>
<td>Adapted my teaching to students of different cultures.</td>
<td>✓</td>
</tr>
<tr>
<td>Helped students improve their writing.</td>
<td>✓</td>
</tr>
<tr>
<td>Talked with students about information related to a course they were taking (grades, make-up work, assignments, etc.).</td>
<td>✓</td>
</tr>
<tr>
<td>Discussed with students their academic program or course selection.</td>
<td>✓</td>
</tr>
<tr>
<td>Discussed with students their ideas for a term paper or other class project.</td>
<td></td>
</tr>
<tr>
<td>Discussed ideas from students' readings or classes outside of class.</td>
<td>✓</td>
</tr>
<tr>
<td>Discussed with students their career plans and ambitions.</td>
<td>✓</td>
</tr>
<tr>
<td>I am interested in students' personal problems at VCU.</td>
<td>X</td>
</tr>
<tr>
<td>Gave prompt written or oral feedback to my students on their academic performance.</td>
<td>X</td>
</tr>
<tr>
<td>Worked with students on activities other than course work (committees, orientation, student life activities, etc.)</td>
<td>X</td>
</tr>
<tr>
<td>Worked with students on my research project.</td>
<td>X</td>
</tr>
<tr>
<td>The quality of your relationships with students:</td>
<td>X</td>
</tr>
<tr>
<td>The quality of academic advising you have given at VCU.</td>
<td>X</td>
</tr>
<tr>
<td>Meet with students outside of class or office hours.</td>
<td>X</td>
</tr>
</tbody>
</table>
### Table 14

**Definition of Satisfaction of Student-Faculty Interactions by Race**

<table>
<thead>
<tr>
<th>Factor 2. Overall satisfaction of student-faculty interactions</th>
<th>White faculty</th>
<th>Asian faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate your satisfaction with VCU on quality of contact with students.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Rate your satisfaction with VCU on amount of contact with students.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Rate your satisfaction with VCU on overall quality of instruction.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Students feel it is very easy to know me.</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>Good teachers will match their instruction to students of different learning styles.</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>In some cultures, students are embarrassed to speak in front of others, so I take this into account and don't call on these students in class.</td>
<td>X</td>
<td>✓</td>
</tr>
</tbody>
</table>
As can be seen from Table 15, Asian faculty members also pay attention to equitable issues in the relationships, such as discrimination and stereotypes among students and fair treatment of minority faculty.

Table 15

*Definitions of Other Factors of Student-Faculty Interactions by Asian Faculty Only*

<table>
<thead>
<tr>
<th>Factor 3. Equitable issues of student-faculty interactions (Asian faculty)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have felt discriminated against by students based on my race/ethnicity.</td>
</tr>
<tr>
<td>In class, I have heard students' stereotypes about my race/ethnicity</td>
</tr>
<tr>
<td>Faculty of color is treated fairly at VCU.</td>
</tr>
</tbody>
</table>

**Factor 4. Know students and cultural awareness (Asian faculty)**

<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>It is easy for students to see me outside of regular office hours.</td>
</tr>
<tr>
<td>I think interacting with undergraduate students has been a source of stress for me.</td>
</tr>
<tr>
<td>It is not fair to ask students who are struggling with English to take on challenging academic assignments.</td>
</tr>
<tr>
<td>A racially/ethnically diverse faculty body enhances the educational experience of all students.</td>
</tr>
</tbody>
</table>

* Differences in Definition of Student-Faculty Interactions by Student Race *

The student survey resulted in three factors related to student-faculty interactions:

1. Quality of Student-Faculty Interactions
2. Quantity of Student-Faculty Interactions
3. Faculty Socialization

Likewise, when we break down the student-faculty interactions to particular groups, we will see the different definitions of student-faculty interactions by White and Asian students.
(Tables 16, 17, and 18). However, unlike the faculty definition of student-faculty interactions, there are few different understandings among White and Asian students. For example, Asian students define faculty members’ visibility and understand faculty members’ expectations as content of student-faculty interactions, while White students do not think in the same way.

As can be seen in Table 16, White students think “interacting with faculty has not been a source of stress”; “worked with faculty members on activities other than course work (committees, student life activities)”; and “discussed academic program or course selection with my faculty”; and “talked with my faculty about information related to a course I was taking (grades, make-up work, assignments, etc.)” are important, while Asian students do not think these are the constitution of quality of interactions. While as for Asian students, faculty members’ adaptation of instruction based on students’ learning styles, the ability of students to understand expectation of faculty academically, and the visibility of faculty is important. In addition, Asian students feel discriminated against from faculty. While White students do not include these in their definition of student-faculty interactions.

As can be seen from Table 17, in the area of Quantity of Interactions, there is no difference. Table 18 presents the area of Faculty Socialization; there is a weak factor of three components, but of the White factor, there is only one component (discuss ideas or classes with faculty outside of class) that define faculty socialization.
Table 16

*Student Definitions of Quality of Student-Faculty Interactions by Race*

<table>
<thead>
<tr>
<th>Factor 1. Quality of student-faculty interactions</th>
<th>White students</th>
<th>Asian students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction of quality of contact with faculty.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Satisfaction of amount of contact with faculty.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>I feel it is very easy to get to know faculty.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Faculty here is strongly interested in the academic problems of undergraduates</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Received prompt written or oral feedback on my academic performance.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Discussed my career plans and ambitions with faculty.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Discussed ideas for a term paper or other class project with faculty.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Faculty is interested in students' personal problems.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>VCU overall quality of instruction.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>The quality of your relationships with faculty members.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Evaluate your entire educational experience at VCU.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>I think interacting with faculty has been a source of stress for me</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Worked with faculty members on activities other than course work (committees, student life activities, etc.)</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Discussed my academic program or course selection with my faculty.</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Talked with my faculty about information related to a course I was taking (grades, make-up work, assignments, etc.)</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Factor 1. Quality of student-faculty interactions</td>
<td>White students</td>
<td>Asian students</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>VCU faculty will match instruction to these learning styles.</td>
<td>X</td>
<td>√</td>
</tr>
<tr>
<td>I can understand what my professors expect of me academically.</td>
<td>X</td>
<td>√</td>
</tr>
<tr>
<td>It is easy for students to see faulty outside of regular office hours.</td>
<td>X</td>
<td>√</td>
</tr>
<tr>
<td>I have felt discriminated against by faculty based on my race/ethnicity.</td>
<td>X</td>
<td>√</td>
</tr>
</tbody>
</table>
Table 17

*Student Definitions of Quantity of Student-Faculty Interactions by Race*

<table>
<thead>
<tr>
<th></th>
<th>White students</th>
<th>Asian students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 2. Quantity of student-faculty interactions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meet a faculty member during office hours.</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Meet a faculty member outside of class or office hours.</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Communicating via email with a faculty member.</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Table 18

*Student Definitions of Socialization With Faculty by Race*

<table>
<thead>
<tr>
<th></th>
<th>White students</th>
<th>Asian students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 3. Faculty socialization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socialized with faculty outside of class (had a snack or soft drink, etc.)</td>
<td>X</td>
<td>√</td>
</tr>
<tr>
<td>Discussed ideas from my readings or classes with faculty members outside of class.</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Was a guest in faculty member's home.</td>
<td>X</td>
<td>√</td>
</tr>
</tbody>
</table>
CHAPTER 5. CONCLUSION

Overview

Rapid demographic changes in the United States and increased demands for access to higher education have compelled institutions to continue diversifying their student and faculty bodies and focusing on improving student-faculty relationships. As universities become increasingly diverse, the understanding of the role played by student involvement with faculty, or engagement of faculty with students, cannot rely solely on previous studies since they do not disaggregate by race/ethnicities. Some researchers (Kim & Sax, 2009; Sax, Bryant & Harper, 2005) suggest that it is possible that aspects of student-faculty interactions may be more or less beneficial for some groups than for others. The multicultural education dimensions outlined by James Banks (2001) help us to frame the concept of multicultural education and establish significant multicultural goals and potential outcomes. His suggestions are: (a) content integration, (b) enhanced awareness of knowledge construction, (c) prejudice reduction, (d) equity pedagogy, and (e) an empowering school culture. Introducing the definition and the perspectives of multicultural education will help us understand the dynamic relationships between student and faculty, and highlight for faculty the rationale and significant goals of multicultural education.

Set in the context of VCU, a large and highly diverse university system, this study examined the impact of three types of student-faculty interactions across White and Asian students and faculty members. As noted in the review of literature, the relationships of
student-faculty interactions have been well documented (Astin, 1993; Carin, Kuh & Klein, 2006; Dixon, Azocar, & Casas, 2003; Pascarella & Terenzini, 1991); however, these studies have limitations due to a reliance on general effects of interactions and analysis based on aggregated student data. These studies suggest there is a relationship between student-faculty interactions and student academic achievement. However, relatively few studies have examined the differential effects of student-faculty interactions across racial/ethnic groups. As such, until the 1990s, the majority of research documenting the association between faculty contact and educational outcomes utilized aggregated samples of students to analyze of the effect of student-faculty interactions on student achievement (Kim & Sax, 2009).

In the past two decades, most disaggregated studies have focused primarily on African American students. In recent years, however, a number of studies have focused on Latino/a students due to the increase of this population in America. Other racial groups, such as Native Americans, are rarely studied. Similarly, there have been a few studies that concentrated on Asian students. Thus, the conditional effect of student-faculty interactions on Asian student achievement remains unknown.

The purpose of this study was to examine the possible relationships of Asian student-faculty interactions on students’ GPA and their multiculturalism compared with White students, and to understand and possibly identify the extent to which certain types of student-faculty interactions enhance or abate academic performance and multicultural orientation.
**Interpretation of Findings**

**Are there differences by race in perceptions of student-faculty interactions?**

There were no differences by race in any types of student-faculty interactions as reported by student and faculty. In other words, there were no student-faculty interactions specific to Asian students.

Why are there not differences by race? Some possible reasons listed below offer explanations.

First, Virginia Commonwealth University has a highly diverse student body. The definition of diversity is defined by VCU: “Diversity is also associated with principles of inclusion and the creation of safe and supportive environments where differences are respected, particularly with regard to historically underrepresented groups and legally protected categories to which individuals may belong” (VCU Office of Diversity, 2011, p. 1).

According to VCU Data Management and Reporting Resources, White students account for 56% of the student population while African American students make up 17%, followed by Asian students (10%), Latino/a students (5%), and international students (4%) (VCU Center for Institutional Effectiveness [VCUCIE], 2010). The research tells us that structural diversity (i.e., the proportion of racial/ethnic minorities in a college setting) has different effects on patterns of interaction among White students as compared to students of color (Anaya & Cole, 2001; Cole, 2001a, 2010b; Cox & Orehovec, 2007; Gurin et al., 2002; Kuh & Love, 2000). With the increased number of minority students and faculty in higher education, it is possible that there are more enhanced opportunities for interactions at more diverse campuses for students of color.

A number of studies have shown that the more racially diverse a campus, the more richer are the varied educational experiences which enable student learning, engagement in more
cross-racial interactions, discussion of issues of race, improve educational benefits, and better prepare students for participation in a democratic society (Antonio, 2001a; Astin, 1993; Chang, 2005, Chang, Astin, & Kim, 2004, Chang et al., 2006; Gurin et al., 2002; Hurtado, 2001; Orfield & Kurlaender, 2001; Sax, Bryant, & Harper, 2005). Unlike for White students, cross-racial interaction for minority students could not be explained simply by the availability of a more diverse student body. Thus, the campus community of VCU may help Asian students have a positive educational experience.

VCU remains deeply and strongly committed to promoting an atmosphere of diversity, equal opportunity, and nondiscrimination (Rao, 2009). VCU has quite a few supporting organizations that are committed to helping minority students and faculty survive. There are over nine offices and committees on campus to help minority students and minority faculty members (VCU Diversity, 2011), such as the University Equity and Diversity Committee, the Diversity Office, the Office of Multicultural Student Affairs, the office for the National Association of Diversity Officers in Higher Education, etc.

Moreover, diversity is a vitally important core value at VCU and the university has done much to increase the awareness of diversity, embrace differences, and foster minority students’ involvement. In August 2009, the university issued the Reaffirmation of VCU’s Equal Opportunity Policy; in the following year, the VCU Board of Visitors approved a 5-year diversity plan. Diversity is also woven throughout VCU’s newly approved strategic plan, Quest for Distinction (Rao, 2009). In addition to the 5-year diversity plan, VCU has issued the Diversity Expectations and Goals to encourage students from underrepresented populations (Rao, 2009). In addition, the VCU 2020 Strategic Plan, adopted in February 2006, stated clearly and directly VCU’s commitment to shape and guide institutional initiatives, policies, plans, and
assessment on diversity (VCU Diversity, 2011). In other words, VCU has facilitated a friendly environment for both White and minority students.

There are significant studies that support the reasons why a friendly environment is important; it is suggested that institutions that understand and appreciate human differences will more effectively foster student involvement (Anaya & Cole, 2001; Cole, 1999; Endo & Harpel, 1982; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1983; Rendón et al., 2000; Wilson et al., 1974).

Minority students feel differently, partially because of the college environment. Participation in postsecondary education often requires minority students to cross a large cultural distance into an environment that neither understands nor values their culture of origin (Flowers, 2003; Jackson & Smith, 2001; Hill, Jackson, & Smith, 2003; Kodama, Lee, Liang, Alvarez, & McEwen, 2002; Pewardy & Frey, 2004). Framed by Astin’s (1984) involvement model, Lundberg (2011) identified the way institutions commit to diversity for student learning. Lundberg’s study suggests that students of color benefit from involvement and from institutional environments that emphasize the value of human diversity. So if Asian American students feel the university is a race friendly place, they may feel comfortable and welcome.

The experiences of Asian students with faculty are different from the experiences of other racial groups. Lundberg and Schreiner (2004) demonstrated that the effects of student-faculty interaction on student outcomes may differ by student race. The no impact of student-faculty interactions by race is important because Asian American students’ contact with faculty can be conceptualized in different ways that are distinct from another racial groups. But if race is an important indication for African Americans/ Latinos, why it is not a predictor for Asian American students?
There is limited direct evidence available concerning the differences among patterns of contact with faculty outside the classroom for Asian students and their counterparts like African Americans or White students. However, the literature that does exist suggests that there are some differences.

There are studies that imply that there are significant differences among African American/Latino/a/Native American and Asian groups. For example, it is suggested that African American and Latino/a undergraduate students appeared to gain less benefit from contact with their faculty as often as Asian and White students even though they reported engaging in discussions of their career plans with faculty (Einarson, 2006). Furthermore, Lundberg and Schreiner (2004) found that despite more frequent contact than Asian groups, both African American and Native American students’ interactions have little significant impact on their learning and they received fewer benefits from student-faculty interaction, despite more frequent contact than other Asian groups. Kim and Sax’s study (2009) on different patterns of student-faculty interaction in research universities suggested that for Asian American and White students only, not for African American students and Latino/s, the experience with faculty relationships promoted gains in critical thinking and communication.

African American and Latino/a students had comparatively high levels of out-of-class engagement with faculty and they reported more frequent discussions of career plans and interactions at social events than White and Asian American students (Einarson & Clarkberg, 2010).

These results suggest that the estimation of general effects using combined student samples cannot fully explain the relationship between student-faculty interaction and student
educational outcomes. Furthermore, the existence of different race/ethnicity effects in student-faculty interaction raises the question about other conditional effects in the college experience.

Indeed, Pascarella (2001) argued that broadening the understanding of the notion of diversity regarding the college student populations beyond racial diversity (e.g., diversity of social class, value, or religious views) may improve the college impact research.

Research on university racial and diversified climate implies that minority students, especially Latino/a and African American students, experience racial hostility more frequently than their White counterparts. High dropout rates and poor academic achievement are related to diminished contact with faculty members (Allen et al., 1991; Carroll, 1998; Ceja & Rivas, 2010; Hurtado et al., 1998; Solorzano et al., 2000; Solorzano et al., 2002). It is hard to tell if Asian students’ low dropout rate is related to better or more contact with faculty. Lundberg and Schreiner (2004) found that talking with faculty members about personal concerns greatly impacted student learning only for African American and Native American students. For Asian students, they did not find differences. Thus, these studies at least partially explained why there is no difference in student-faculty interactions across White and Asian students, and why there is no relationship between student-faculty interactions and student GPA.

Einarson and Clarkberg’s study (2010) showed that African American and Latino/a students reported more frequent interactions with faculty than their White and Asian American peers. These findings are consistent with previous research (Kuh & Hu, 2001; Lundberg & Schreiner, 2004). Moreover, Asian students and White students reported a positive effect on their level of satisfaction with university for socializing with someone of different race (this includes interacting with faculty from different races), but African American students are the only group whose overall level of satisfaction is negatively affected after socializing with
someone of a different race (Greene et al., 2006). Einarson and Clarkberg (2010) also found the impact of faculty interaction for Asian American students similar in many ways to those for White students, with academically-oriented forms of interaction having stronger associations with outcomes than more socially-oriented contact.

Another difference between African American/Latino/as/Native American and Asian students may be explained by the notion that Asian students are highly represented in the university. At the same time, both Latino/a and African American students tended to perceive inaccessibility cues and nuanced feelings from faculty (Anaya & Cole, 2001; Cole, 2007, 2010b) and they regard universities as racially discriminating (Nettles, 1990), conservative, and restrictive places (Gonzalez, Marin, Figueroa, Moreno, & Navia, 2002).

The racial attitude among Asian and White students may also help us understand one of the results of my study as to why there is no difference of student-faculty interactions by race of White and Asian students. Smith et al. (2007) indicate Asian students’ rating of African Americans is the greatest difference, while their rating of White students is the least difference. That is to say, Asian students feel most comfortable with White students and feel least comfortable with African American students. While for White students, they feel least comfortable with Latino/as and most comfortable with African Americans (Dixon et al., 2003; Hall, 2002; Lowery, Hardin, & Sinclair, 2001; Smith et al., 2007).

Asian faculty representation at VCU is the highest among all the minority groups. Comparatively speaking, in the United States the percentage of Asian faculty is high. According to the National Center for Education Statistics (2010), within degree-granting institutions in the United States, African Americans account for 12% of the student population, but 7% of the faculty population; Latina/o students make up 10% of the student population, and 3% of the
faculty; Native American or Alaska Native students comprise 1% of the student population, but less than .5% of the faculty ranks. As for Asian and Pacific Island students, the discrepancy is smaller; Asian Americans make up of 7% of the student population and 6% of the faculty (Ryu, 2010).

According to the statistics from the National Center for Education Statistics (2001, 2010), both minority faculty and minority students are underrepresented in higher education. Because minority faculty members are more underrepresented in higher education than minority students, access to faculty members of the same race is a big challenge for minority students. What is more, the power and dynamics differences between students and faculty can trigger an imbalance of institutional power along racial/ethnic lines (Lundberg, 2011).

At VCU, there is a larger proportion of Asian faculty members than any other group, except for White faculty. According to 2010 university raw data for full-time instructional faculty by school, White academics are 79.7% of the faculty; among all the racial/ethnic groups, the percentage of Asian faculty is the highest. There are 219 Asian faculty members at VCU, which account for 11.4% of the faculty population, while Asian students make up 8.6% of the student body. The percentage of minority faculty from other racial/ethnic groups are lower: African Americans make up 17.1% of the students, but only 5.4% of the faculty; Latino/a students comprise of 3% student population and 2.2% of the faculty; Native American or Alaskan Native consist of .5% student body, but .4% of the faculty. In other words, the percentage of Asian faculty on VCU campus is the highest among minority groups.

At VCU, there are 1,529 White faculty members and 11,161 White students. The White teacher student ratio is .14. That is, every 100 White students have 14 White faculty members. As for the Asian population, there are 219 Asian faculty members and 2,479 Asian students, so
the Asian faculty and student ratio is .09. That is, every 100 Asian students share nine Asian faculty members.

By comparison, altogether there are 104 African American faculty members and 4,236 African American students. The African American faculty and student ratio is .02. The population of Latina/o is 43 Latina/o faculty members and 640 Latina/o students. The Latina/o faculty and student ratio is .07. There are only 8 Native American/Alaskan Native faculty members and 139 students. Thus, except for White faculty, there is a larger Asian student teacher ratio than any other group.

The contributions of minority faculty include:

1. Minority faculty can serve as role models to minority students (Anaya & Cole, 2001; Cole, 2007, 2010a). Significant studies show that with the presence of same-race faculty member, role models could be important in the educational aspirations and experiences of students of color (Bergstrom et al., 2003; Ness, 2002; Stein, 2003; Tippeconnic & McKinney, 2003). In an earlier study, Cole (1999) points out that it had been assumed that the presence of same-race role models is a necessity in the educational and occupational socialization of individuals. Coursen, Mazzarella, Jeffress, and Hadderman (1989) suggest student interactions with diverse role models are important with regards to setting higher career and educational goals. Likewise, De la Luz Reyes and Halcon (1991) indicate minority professors are essential because not only do they provide diversity among faculty, they also provide student access to diverse faculty role models. Furthermore, Speizer (1981) suggests that the evidence on the effectiveness of race-based role models has been more “suggestive rather than proven” (p. 712). More recently, Cole and Barber (2003) found that the ethnicity of the faculty role model is very important in students’ aspirations to pursue a career in academia.
2. Minority faculty can provide a curriculum that feature diversity. Lovell et al. (2002) indicate faculty members are more effective when they share common experiences and characteristics with students. Hurtado (2001, 2007) concludes that minority faculty members are more likely to utilize pedagogy approaches that capitalize on the diversity in their classroom. Guiffrida (2006) studied African American students and faculty and summarized that African American students perceive African American faculty more likely to incorporate Black culture, history and ideas into their curricula and less likely to stereotype African American students by race.

Apart from the contribution of the minority faculty at college, students will benefit from the instructions and interactions with minority faculty as well.

1. Same-race effect. When students are in courses taught by a professor with an ethnic and linguistic background different from their own, both student and faculty will encounter some level of discomfort, tension, and conflict (Boutte, 1999; Lee & Janda, 2006; McGowan, 2000). In other words, we can assume that if Asian students interact with Asian faculty, they may feel comfortable and less stressed. From the Asian students’ perspective, Asians show greater preference for people of their own racial background (Smith et al., 2007). Since there are many Asian faculty members around, Asian students can form close relationships with Asian faculty who reside in the same community as the students, have similar culture, and speak the students’ native language. Not only Asian students, other minority students also find faculty members of the same-race provide a welcoming atmosphere (Bergstrom et al., 2003; Ness, 2002; Tippeconnic & McKinney, 2003). Beyond getting help and advice from faculty, Asian students may also seek different levels of attachment to and involvement in their host cultures or heritage.
cultures (Padilla & Perez, 2003). Thomas Dee (2004) studied the race connection and found that student outcomes improved by 2% to 3% during their first year with a teacher of the same race.

2. Comfort-level effect and shared culture effect. Boutte (1999) and McGowan (2000) state that students enrolled in courses taught by professors coming from different ethnic or linguistic backgrounds experience discomfort. Jacobs and Friedman (1988) noticed that some students avoid enrolling in particular courses after seeing foreign names of instructors listed in a course schedule. The reason may be that students feel uncomfortable because they know the instructional faculty is not from the same cultural background. Ots (1988) interviewed 38 minority students at the University of Tartu and reported that almost all the foreign students in his interview admitted experiencing culture shock.

Moreover, Asian faculty can act as bridges between the home lives of the students and their experiences in college and demonstrate much empathy and support for students of the same race/ethnicity. Some studies on Native Americans encourage universities to hire more qualified Native American faculty and staff because Native American students feel faculty of Native American backgrounds are more approachable and they have an easier time regarding what students need than faculty that are racially/ethnically different from the students (Ness, 2002; Tippeconnic & McKinney, 2003).

3. In-group vs. out-group effect. Sumner (1906) maintained that humans are a species that join together in groups by their very nature. Moreover, humans have an innate tendency to favor their own group over others. According to Burgoon’s (1983) Expectancy Violation Theory, people have a general tendency to favor his/her in-group. This may help us understand why Asian students tend to show a greater preference for members of their own racial background (Lee, 2009; Smith et al., 2007), and why Asian students express the need for more
Asian mentors and role models (Suzuki, 2002). With more Asian faculty on campus, Asian students may be likely to interact with Asian faculty members, and these interactions may ultimately shape the Asian students’ experience with faculty members.

In my study, I did not test directly the possible influence of Asian faculty on Asian students, however, based on the existing literature, faculty members play a positive role on students who share the same racial/ethnic background with faculty. Moreover, the representation of Asian faculty at VCU is the highest among any other racial/ethnic groups. It is possible that the presence and the visibility of Asian faculty on campus play an essential role in the experience of Asian students.

Obviously the student-faculty interaction is more complicated and not merely the outcome of two groups being in contact with each other. Except for race, there must be other factors that will influence student-faculty interactions. Many social and environmental conditions or constraints exist that can largely determine the experience of students/faculty or racial groups in the process of interactions. However, because of my interest in the role of race, and because of the difficulty including all variables that will impact student-faculty interactions, I only tested the relationship of race and student-faculty.

**Are There Differences by Race of Student-Faculty Interactions on GPA?**

None of the variables in this question add meaningful explanation to student GPA. Therefore, there were no differences by race in any types of student-faculty interactions on GPA as reported by student.

While evidence concerning the positive impact of student-faculty contact, conceived in general terms, is virtually unequivocal (e.g., Astin, 1984, 1993; Kuh, 2001; Kuh & Hu, 2001; Kuh et al., 1991; Pascarella & Terenzini, 2005), the extant research also indicates that the
quantity/frequency of student-faculty contact and the benefits accruing from it are conditioned by other variables such as the specific type of student-faculty interactions and outcomes under consideration; the institutional environment and other aspects of students’ involvement in college; and students’ personal characteristics (Einarson & Clarkberg, 2010).

There are significant studies (Anaya & Cole, 2001; Kuh & Hu, 2001; Pascarella, 2001; Pascarella & Terenzini, 1983, 1991, 2005) that document either positive or no influence of student-faculty interactions on student GPA. Stipek (2002) rationalizes that faculty feedback, comments, criticism, and dialogue could positively and greatly influence student learning. In a meta-analysis of the higher education literature, Pascarella and Terenzini (1991, 2005) identify significant studies (Milem, & Berger, 1997; Kuh & Hu, 2001) that found a positive correlation between faculty-student interactions and student outcomes. As a fairly large body of evidence indicates, it may be that the quality and perceived importance of students’ interactions with faculty have more developmental impact than the frequency with which such interactions occur (Pascarella & Terenzini, 2005).

Why is there no relationship between quantity of contact with faculty and student GPA? First, the time students spend with faculty is very limited. Einarson and Clarkberg’s (2010) study notes that, regardless of race, students report rather limited out-of-class contact with faculty. This was particularly the case for students’ involvement with faculty in research, intellectual discussions outside of class, and at social events. Einarson and Clarkberg (2010) study White, African American, Latino/as and Asian students and find the average time contact with faculty ranges from 2.17 to 2.30 hour per week across race groups. And this type of contact with faculty is more likely to occur “occasionally” than “often” for most students. Longitudinal
research shows the frequency of students’ contact with faculty members outside the classroom has not changed much over the past two decades.

Nathan (2005) indicates the relatively low and unchanging frequency of student-faculty contact, as a whole, may be a function of students’ own inclinations or developmental needs. After he studied the freshman year experience he found that many students would rather create their own personal networks and social experiences than participate in extracurricular events organized by their university. Kuh and Hu’s (2001) significant study of the effects of student-faculty interaction in the 1990s also found students are more likely to contact with their peers instead of their faculty.

Second, even though some students try hard to contact with faculty members, there is no causal relationship between students’ GPA and time they spend with faculty. For example, a study by Kuh and Hu (2001) found that African American students interacted more with faculty than Whites, Asian Americans, Latinos, and Native Americans in all three areas of measured interaction (academic or career-related interaction, personal or social contact, and interaction related to students writing improvement). While, Asian American students are documented experiencing lower rates of student-faculty interaction than their peers (Chang, 2005; Kim, Park, & Chang, 2006). However, even though African American and Native American students work hardest to meet faculty expectations, due in part to faculty feedback, these interactions have little significant impact on learning for either group (Lundberg & Schreiner, 2004). According to the results, Lundberg and Schreiner conclude that African American and Native American students receive relatively less benefits from their interactions with faculty, despite more frequent contact than other racial groups. These studies suggest that all student racial groups spending time with
faculty and the quantity of interactions do not necessarily benefit from this interaction in the same way.

There are some studies that support my result that there is no relationship between socialization with faculty and student GPA. Socializing with faculty, such as talking, socializing at a party, or having a drink with a faculty member, as compared to discussing course selection in a faculty member’s office—differ in the nature of their impact on students’ college experiences. With interactions that concern academic or intellectual issues having a stronger impact than interactions that are primarily personal or social in nature (Cabrera et al., 1999; Endo & Harpel, 1982; Kuh & Hu, 2001; Pascarella & Terenzini, 1977; Pascarella et al., 1978).

In extending my view of student-faculty interaction as a mutual process in which both dominant (White) and nondominant (Asian American) groups are involved, it is necessary to take into account the racial/ethnic differences that distinguish the groups and their relationship to each other.

There are also some studies that indicate that minority students may feel differently in the their college experience than majority race students. It is suggested that minority students can feel college environments are quite foreign and alienating (Ancis et al., 2000; Fries-Britt & Turner, 2001; Torres et al., 2004). Lundberg and Schreiner (2004) found that both African American and Native American students’ interactions have little significant impact on their learning and they received less benefits from student-faculty interaction than other groups.

The results of my study indicate that student-faculty interactions do not have a strong positive impact on student GPA for either White or Asian students. Only Factor 1, Quality of Student-Faculty Interactions explains 7% ($r^2 = .07$) of the variation of student GPA. It is a small contribution to understanding student academic achievement. This result is consistent with
Cole's (2010b) work that suggests similar findings. By using national data from the College Student Experiences Questionnaire (CSEQ), Cole demonstrated the significant relationship between student-faculty interactions, peer involvement, accessibility cues and all students’ GPA. However, when he disaggregated by racial groups, the variation explained by these composite variables are different. The variance of GPA explained by college experiences ranged from 3.8% (Latino/as) to 13.2% (African Americans). Cole concluded that African American students’ GPA appeared to be affected the most by student-faculty interactions; Latino/a students were influenced the least by student-faculty relationship; and Asian American students are in the middle with 10.2% of the variation of GPA accounted for by the interactions with faculty and peer relationship. Because Cole’s study was an analysis of the composite influence of student-faculty interaction and peer relationship, it is difficult to determine the exact percentage of variation of GPA explained by only student-faculty interactions.

The results from my study imply that there are a variety of factors that may have affected the outcome of student GPA that I did not measure. These factors might explain additional variance in the GPA. For example, as suggested by Cole and others, peer interactions also have essential effects on students’ GPA (Astin, 1993; Cole, 2007; Cole & Jackson, 2005; Cox & Orehovec, 2007; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1991; Stipeck, 2002).

**Is There any Relationship by Race of Student-Faculty Interactions and Multicultural Perceptions?**

The survey asked students to report their self-estimates of changes in their multiculturalism since first entering college and their perceptions to diversity.

One of the results found in my study is that the quality of student-faculty interactions has a positive relationship on students’ multicultural perceptions. There are no relationships between
race and students’ multiculturalism, time spent with faculty and multiculturalism, and socialization with faculty and multiculturalism.

Quality of student-faculty interactions accounts for 18% of variation in the levels of student multiculturalism. In other words, the better the quality of the student-faculty interactions, the higher the level of multicultural perceptions.

Several findings in this study on the relationships among student-faculty interactions and multiculturalism are consistent with prior literature. The studies of Pascarella, Edison, Nora, Hagedorn, and Terenzini (1996) and Whitt, Edison, Pascarella, Terenzini, and Nora (2001) suggested that race was not a significant predictor of openness to diversity.

Moreover, Chang et al. (2006) pointed out that the average level of interracial interactions between both students and students, and students and faculty, positively affects students’ self-comparison of gains made since entering college, particularly in their knowledge of, openness, and ability to accept different races and cultures. Likewise, Whitt et al. (2001) found that across students’ first 3 years of college their interaction with other minority students, are positively related to significant gains in openness to diversity.

Cole (2007, 2010a) and others report additional elements that influence students’ perceptions, such as peer interactions or attending a college race workshop. Unfortunately, I did not include these factors in my study. For future studies, other factors, such as peer interactions or university environment, may predicate students’ multicultural level.

Several reasons can explain why quality of interactions with faculty can be a strong predictor of multiculturalism. From a student’s perspective, the exposure and engagement in any activity related to race, such as interaction with a minority faculty member, may help students think about more and be more comfortable with diversity. For example, Astin (1993) articulates
that students who engaged in diversity activities (e.g., discussing racial issues, interacting with students or faculty of another race) reported greater gains of cultural awareness and commitment to promoting racial understanding than those who did not. Pascarella et al. (1996) developed the Openness to Diversity Scale, to test students at the beginning and end of their first college semester. They found that there is a positive relationship between students who develop more interpersonal interactions with minority faculty, and other students were more open at the beginning of the first semester throughout the semester.

Astin’s (1984) involvement theory and Inputs-Environments-Outcomes (I-E-O) framework (1991) can be of some help understanding and explaining this result. Astin’s involvement theory stresses “faculty behavioral mechanisms or processes that facilitate student development” (Astin, 1984, p. 301). Here the behavioral mechanisms can be manifested by faculty behavior and attitude toward students. Astin suggests that students are more likely to learn and develop when they invest more time and energy in meaningful college experiences.

Lundberg (2011) found that students of color learn more knowledge of diversity in institutions committed to understanding and appreciating human diversity where faculty and administrators were helpful and approachable. Interacting with students consistently predicted first year development in students’ effective reasoning and problem solving, well-being, inclination to inquire and lifelong learning, intercultural effectiveness, leadership, and moral character (Pascarella & Seifert, 2010).

Within the past two decades, significant studies have concluded the importance of cross-racial student-faculty interactions on students’ lives, especially in developing life-long knowledge and skills (Astin, 1993; Milner, 2003). However, there are rarely studies specific to the influence of Asian faculty on students. There are some studies analyzing the impact of
minority faculty on students, however, these studies revolve around African Americans, or from Latino/a faculty members. For example, Milner (2003) demonstrates in a case study that African American female teachers utilized “cultural comprehensive knowledge” to provide more effective instruction to students (p. 181). These instructions are composed of one’s cultural and gendered understanding of their experiences and how it alters their worldview. Consequently, the way of teaching will change students’ worldview. Foster’s (1993, 1997) study of African American teachers also suggests how important, from a teacher’s perspective, it is to provide students, especially African American students, with how to understand their role in the community and the world. Monzó and Rueda’s (2000) study shows Latino/a faculty members helped expand students’ comprehension of the world. They were able to form close relationships with students because they usually resided in the same community as the students and spoke the students’ native language. Unfortunately, because there are few studies about the contribution of Asian faculty and the influence on students, it is hard for us to know what influence the Asian faculty may have on the students.

Moreover, Tettegah (1996) concluded that despite different levels of racial consciousness, the majority of the White prospective teacher candidates rated African American and Latino/a students as possessing lower cognitive skills than Whites and Asian Americans, and viewed Asian American students highest in the appropriate behavior dimension. Likewise, Kim’s (2010) study of the relationship of student-faculty interactions is on multicultural orientation and documented racially different patterns of student-faculty interactions. His conclusion was that student-faculty interactions have no statistically significant effect on racial tolerance for African American and Latino/a students, as opposed to having a significantly positive effect for White and Asian American students. Kim’s study also suggested that academic and personal faculty
contact tends to affect more strongly Asian students’ racial tolerance compared to African American students’ tolerance.

Further research may need to be conducted to determine what other factors influence student’s multicultural perceptions.

**Differences in Faculty and Student Perceptions of Understanding of Interactions**

The factor analysis revealed that the student definition of student-faculty interactions goes beyond the faculty definition of student-faculty interactions.

By comparison, survey responses from both students and faculty members resulted in three factors. Student experience and understanding of student-faculty interactions, however, cover wider range and different aspects of student-faculty actions than faculty definition. For example, student experiences of student-faculty interactions consist of 18 components, while faculty experience of student-faculty interactions are composed of 12 items. Additionally, student experience includes student perceived quality of student-faculty interactions; it reflects student satisfaction with not only faculty member’s instruction levels, advising level, but also satisfaction with faculty contact and relationships. Cole (2010b) in his study of both aggregated and disaggregated data organizes four categories of student-faculty interactions. Apart from his first three factors, general contact, academics, primary-personal interaction, his fourth factor is like my third factor, satisfaction of interactions. Students assess the quality of faculty contact regardless of the type of contact experienced. Thus, students who only experience general contact with professors may be as satisfied with their faculty relations as students who have had primary-personal faculty contact.

Early empirical studies conducted by Snow (1973) and Wilson et al. (1974) measured the amount of student interactions and concluded well-established six faculty roles: instructor,
educational advisor, career advisor, friend, counselor, and campus citizen. Minority students were only included in a few of these early studies (Gurin & Katz, 1966; Wilson et al., 1974). All these years, the six roles of faculty is a guideline for faculty. However, as the time goes by, student’s understanding of faculty role may go beyond the traditional six faculty roles (Cole, 2010b) and they may want to include measures that concentrate on social-psychological dimensions which consist of faculty attitudes and prejudice reduction, and perceptions of racial/ethnic tension and discrimination (Cole, 2010a), like faculty helpfulness, faculty concerns for teaching and student’s personal life, and faculty concerns for student development, etc. Students may internalize these attitudes from faculty about teaching and treating students and this may shape their attitudes toward interactions with faculty and aspirations for multiculturalism. Students’ experience of raising their standard for acceptable effort due to the high standards of faculty, and this experience is associated with students’ perception of belonging at the campus, and ultimately serves to improve students cultural appreciation and social awareness (Kim & Sax, 2009). The differences of student and faculty member’s experience suggest a more modern faculty-student relationships that extend well beyond academic issues, are more interpersonally engaging, and likely initiated and definitely encouraged by the professor.

**Differences in Perceptions of Student-Faculty Interactions by Faculty Race**

My research results of perceptions of student-faculty interactions by faculty race indicated that Asian faculty members include wider view of student-faculty interactions. The perception of what constitutes student-faculty interactions not only include quality, quantity of interactions, but also include equitable issues, accessibility cues, and cultural adaptation. Tettegah (1996) concluded that people with different racial/ethnic backgrounds have different
levels of racial consciousness; White people do not usually think of themselves as having a race; race is a marker for “the other” (Landsman, 2001).

Cultural diversity in the university helps students and professors to retain their own cultural and ethnic identity, take pride in their own cultural heritage, and, at the same time, foster the appreciation of diversity among the whole university community (Lee & Janda, 2006). VCU remains committed to diversity, equal opportunity, and nondiscrimination (Warren, 2011) and this helps Asian faculty members to retain their cultural awareness and appreciation of difference cultures.

To sum up, there are differences in the constitution of the student-faculty interaction factors by race. It is suggested that the estimation of general effects using combined student/faculty samples cannot fully explain the relationship between student-faculty interactions. One group’s contact with faculty can be conceptualized in different ways that are distinct from another racial group. Even though we used the same instrument to survey students and faculty, we cannot assume perceptions by race are the same. This study poses a methodology challenge as to how to analyze student-faculty interactions when faculty and students’ perceptions of student-faculty interactions are different, and there are different constitutions by race.

**Implications for Faculty and Students**

This study sheds some understanding on the nature of faculty-student interactions at VCU and if the interactions differ by race/ethnicity of students and faculty.

**Implications for Faculty**

Given the important relationship between quality of interactions with faculty and students’ multicultural perceptions, the improvement of faculty members’ teaching skills in the multicultural classrooms is crucial in terms of showing concern to students, discussing topics
related to students’ courses, and supporting their intellectual and cognitive growth in the areas of pluralism and diversity. Also, faculty members need to re-evaluate their curricula and personally examine their own cultural biases to increase their accessibilities cues, and to provide help to and instruct students in a culturally relevant manner. Moreover, because students appreciate faculty who match their instructions to students of different learning styles, faculty need to familiarize with different teaching methods and adjust his or her pedagogical and instructional practices. Because the cultural factors may contribute to the nature of students’ interactions with faculty, they should be addressed and incorporated in professional development programs for faculty especially for White faculty. For White faculty, the knowledge of other races/ethnicities needs to be enhanced. By doing this, the school will decrease the chance of having faculty that have not been trained in integrating cultural traits and values into classroom curriculum and daily practice with minority students.

The results from my study imply that if faculty members want to improve the quality of instruction and students’ performance, the extension of quantity of interactions does not help and the quality of interactions count. It is not beyond the scope of this study, but current research in multicultural education reveals that multicultural curriculum strategies that emphasize holistic approaches promote greater student achievement (Banks & Banks, 2004; Pang, 2004).

In this case, faculty may focus more on how to help students, show concerns to students, and adjust the instruction to a different student body. Moreover, as higher education institutions seek to prepare students to live and work in a global society, many realize that faculty must be equipped to address challenge of multicultural education (Author, 2006, 2009) and how to help students embrace the conceptions of multiculturalism and diversity. So institutions
systematically educate their faculty, and faculty members must prepare themselves to transform their courses to embrace a multicultural curriculum.

Moreover, faculty members need to commit to an inclusive pedagogical approach and educate themselves essential skills in how to show concern to students. Faculty may consider attending more professional development and workshops to enhance multicultural literacy among teachers and students. This training can lead to vigorous multi-perspective perceptions and learning environments that ultimately affirm more diverse student body.

**Implications for Students**

Students can conduct cultural audits or create diversity initiative groups to help university and faculty members to provide a more culturally inclusive environment. A multicultural council or other organizations with some faculty members on board can be established to help both White students and minority students to interact with faculty. The counseling center can direct and guide students who have difficulty to communicate with faculty and also provide help on how to understand different cultures of minority faculty.

**Implications for Methodology**

Previous studies analyzing the effects of student-faculty interactions by using aggregated minority student data can be misleading. This study posed a methodological challenge to how to analyze student-faculty interactions when faculty and students’ perceptions of student-faculty interactions are different, and there are different constitutions by race. Unique factor structures for specific racial/ethnic groups need to be identified because one group’s student-faculty contact can be conceptualized in different ways that are distinct from another racial group, and same factor structure analyzing can be misleading.
Limitations

First, designed by a convenience sample, the web survey did not mirror all VCU undergraduate students and faculty members who teach undergraduate courses in terms of student-faculty interactions. In addition, with a sample of only one institution, I was somewhat limited, not only in terms of statistical power to uncover significant findings, but also with respect to the sophistication of my analytic approach.

Second, low response rate posed a problem in this study. The results of the analysis may not necessarily apply to other 4-year public or private institutional settings.

Although the data in this study were disaggregated by race/ethnicity by Asian and White students and faculty members, and there were no relationships between these two races and student-faculty interactions, it did not mean the findings specific to the affects of African American and Latino/a groups’ faculty contacts on GPA and multiculturalism cannot be identified.

What is more, in this study, the Asian American group was treated as one race. Actually, Asian Americans are not a homogeneous population. In addition, Asian Americans immigrants experience a serious of educational disincentives, such as lacking high school credentials, having refugee background, struggling basic surviving, immigrating at a younger or older age, suffering language barriers and culture shock, experiencing financial shortage and economic needs, needing family support and other social capitals, and even for some, lacking legal status. Moreover, Asian American immigrants of different generations, their story and experience may appear differently. Recognizing these disincentives and understanding their impact are important initial steps in preparing the Asian American immigrant population to contribute to and share in the future prosperity of the country through higher education. In summary, the aggregated data
on Asian American may homogenize the experiences of Asian American and depict a distorted picture of the educational experience for both Asian faculty and students.

Another important limitation of this study lies in the fact that the population of White faculty within my sample is substantially larger than the population of Asian faculty. I had a small population of 25 Asian faculty in this study. Although I conducted the normal distribution tests to both White faculty and Asian faculty, the unequal sampling may have influenced my results. Asian faculty represented only a very small portion of the sample examined. That is to say, unfortunately, this study did not contain sufficient numbers of Asian faculty for reliable analysis.

**Recommendations for Future Study**

The institutional effects were not included in my study. While some studies suggest that institutional factors are critical to student-faculty interactions and that both (Astin, 1993; Aud et al. 2010; Gurin et al., 2002; Hurtado, 2007; Solorzano et al., 2002; Teranishi, 2002b) an institutional emphasis on diversity and involvement in the college experience benefits students of color. Tanaka (2002) argues that measures of around cultural diversity must be considered in models of student success. In addition, a panel discussion before the study would be helpful to get more insight of people’s values and attitudes toward the student-faculty interactions. As such, for future reference, I can include the impact of institutions to assume an active leadership role to enhance the academic and social experience of all students, increase the representation of minority faculty, and increase cultural sensitivity and inclusion on campus.

To the extent that daily student-faculty interaction is a function of a complex set of institutional conditions associated with positive relation with faculty. In my study, in order to test the impact of race on student-faculty interactions, the items I chose revolve around the
content only directly associated with interactions. Sociopolitical and sociocultural aspects of environmental and cultural contexts were not included. Future studies need to conduct comprehensive and contextual-based investigation to include items related to university atmosphere, such as how universities engage with diversity, how overall institutional quality is associated with higher than average quality of contact among students and faculty. Any attempt to theorize the educational relevance of student-faculty interactions should be included. That is, we need to focus not only on interpersonal relationships, but also emphasize how broader aspects of the context, such as campus environment that may also shape the experience of student-faculty interactions.

Previous studies suggested that minority students may feel differently in their college experience. With these different outcomes, we can disaggregate samples to compare and contrast the impact of student-faculty relationships across different racial groups. These contrasts can include not only Asian, but also African American, Latino/a, and Native American groups. Future studies can also disaggregate the Asian student samples by racial/ethnic subgroups, disaggregate Asian by its ethnic subgroups, and highlight that minority students may experience student-faculty interactions differently than White students.

Also, it is interesting to note that there was no difference between Asian and White students in their contacts with faculty members. These findings may possibly generate further investigation into the reasons why Asian students’ interactions are similar to White students, while there are differences among African Americans and Latino/as. One of the strong points of this study is the focus exclusively on Asian American students, but a liability is its treatment of all Asian groups as one entity. Further investigation can disaggregate the Asian groups by geographic area or other standards, and test the model for each specific Asian group. Moreover,
students of color often cross a large cultural gap as they interact with a predominantly White faculty, which may hinder learning for students of color (Lowe, 2005; Noel & Smith, 1996). This study showed no difference between Asian American students and White students in terms of their interactions with faculty. Does it mean Asian students have stronger acculturation and adjustment than other groups?

Hurtado and Carter (1997) differentiate students’ integration from students' social participation, thinking that these two are conceptually different. They conclude that social participation does not assume that minority students must acculturate to the mainstream norms of predominantly White institutions. This is important information for school administration. For example, higher education administrators generally have included increasing minority faculty and students numbers in their recruitment and admission planning agenda, aiming at the increasing diversity of their universities. School administrators need to keep in mind that simply increasing the numbers of minority students and faculty members is not enough. Universities need to focus more on how to increase minority involvement in campus life and academics.

Moreover, to fully and truly engage students, faculty members, administrators, and universities must reach out to diversified students in ways that are socially, culturally and linguistically responsive and appropriate, and must frequently and carefully examine the cultural assumptions and stereotypes remain in the classroom and campus that may hinder students’ interconnectedness.
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Appendix A

VCU Cross-Race Student-Faculty Interactions Student Survey

1. Since entering VCU, how often have you interacted with a member of the faculty on average during a typical week? (Mark one for each item)

Meet a faculty member during office hours
{Choose one}
( ) None
( ) less than 1
( ) 1-2
( ) 3-4
( ) 5-6
( ) 7-8
( ) 9-10
( ) 11-12
( ) 13-14
( ) 14 or more

Meet a faculty member outside of class or office hours
{Choose one}
( ) None
( ) less than 1
( ) 1-2
( ) 3-4
( ) 5-6
( ) 7-8
( ) 9-10
( ) 11-12
( ) 13-14
( ) 14 or more

Communicating via email with a faculty member
{Choose one}
( ) None
( ) less than 1
( ) 1-2
( ) 3-4
( ) 5-6
( ) 7-8
( ) 9-10
( ) 11-12
( ) 13-14
( ) 14 or more
2. How many courses you are taking this semester?
   {Choose one}
   ( ) 1
   ( ) 2
   ( ) 3
   ( ) 4
   ( ) 5
   ( ) more than 5

3. Indicate how well each of the following describes VCU: (Mark one for each item)

   Faculty is interested in students' personal problems
   {Choose one}
   ( ) Strongly Disagree
   ( ) Disagree Somewhat
   ( ) Agree Somewhat
   ( ) Strongly Agree

   Faculty here is strongly interested in the academic problems of undergraduates
   {Choose one}
   ( ) Strongly Disagree
   ( ) Disagree Somewhat
   ( ) Agree Somewhat
   ( ) Strongly Agree

   I can understand what my professors expect of me academically
   {Choose one}
   ( ) Strongly Disagree
   ( ) Disagree Somewhat
   ( ) Agree Somewhat
   ( ) Strongly Agree

   I feel very easy get to know faculty
   {Choose one}
   ( ) Strongly Disagree
   ( ) Disagree Somewhat
   ( ) Agree Somewhat
   ( ) Strongly Agree

   It is easy for students to see faculty outside of regular office hours
   {Choose one}
   ( ) Strongly Disagree
   ( ) Disagree Somewhat
   ( ) Agree Somewhat
   ( ) Strongly Agree
I think interacting with faculty has been a source of stress for me
{Choose one}
( ) Strongly Disagree
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Strongly Agree

4. Below are some statements about instruction of VCU faculty. Indicate the extent to which you agree or disagree with each of the following

VCU faculty have adapted teaching to students with different cultures.
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

VCU faculty think students of different races and ethnicities often have different learning styles and good teachers will match instruction to these learning styles.
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

VCU faculty think that in some cultures, students are embarrassed to speak in front of others, then take this into account and don't call on these students in class.
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

VCU faculty think it is not fair to ask students who are struggling with English to take on challenging academic assignments.
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly
5. Since entering VCU, how has it been to: (Mark one for each item)

I have felt discriminated against from faculty based on my race/ethnicity
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

In class, I have heard faculty stereotypes about my race/ethnicity
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

A racially/ethnically diverse faculty body enhances the educational experience of all students
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Faculty of color are treated fairly at VCU
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Racial and ethnic diversity should be more strongly reflected in curriculum
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

6. Please rate your satisfaction with VCU on each of the aspects of college life listed below.
(Mark one for each item)
Amount of contact with faculty
{Choose one}
( ) Very Dissatisfied
( ) Dissatisfied
( ) Neutral
( ) Satisfied
( ) Very Satisfied
Quality of contact with faculty
{Choose one}
( ) Very Dissatisfied
( ) Dissatisfied
( ) Neutral
( ) Satisfied
( ) Very Satisfied

VCU overall quality of instruction
{Choose one}
( ) Very Dissatisfied
( ) Dissatisfied
( ) Neutral
( ) Satisfied
( ) Very Satisfied

7. In your experience at VCU, during the current school year, about how often have you done each of the following?

Asked faculty for advice and help to improve my writing
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Received prompt written or oral feedback from faculty on my academic performance
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often
Worked with faculty members on activities other than coursework (committees, student life activities, etc.)
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Talked with my faculty about information related to a course I was taking (grades, make-up work, assignments, etc.).
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Discussed my academic program or course selection with my faculty
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Discussed ideas for a term paper or other class project with faculty
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Discussed my career plans and ambitions with faculty
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Socialized with faculty outside of class (had a snack or soft drink, etc.)
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often
Was a guest in faculty's home  
{Choose one}  
( ) Never  
( ) Sometimes  
( ) Often  
( ) Very Often  

Discussed ideas from my readings or classes with faculty members outside of class  
{Choose one}  
( ) Never  
( ) Sometimes  
( ) Often  
( ) Very Often  

Work on faculty member's research project  
{Choose one}  
( ) Never  
( ) Sometimes  
( ) Often  
( ) Very Often  

8. Select the circle that best represents the quality of your relationships with faculty members: (1-7 level)  
Unavailable, Unhelpful, Unsympathetic (1)-------Available, Helpful, Sympathetic (7)  
{Choose one}  
( ) 1  
( ) 2  
( ) 3  
( ) 4  
( ) 5  
( ) 6  
( ) 7  

9. Overall, how would you evaluate the quality of academic advising you have received at VCU?  
{Choose one}  
( ) Poor  
( ) Fair  
( ) Good  
( ) Excellent  

10. How would you evaluate your entire educational experience at VCU?  
{Choose one}  
( ) Poor  
( ) Fair  
( ) Good  
( ) Excellent
11. In thinking about your VCU experience with faculty up to now, to what extent do you feel you have gained or made progress in the following areas?

Gaining knowledge about other parts of the world and other people (Asia, Africa, South America, etc.)
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Becoming aware of different philosophies, cultures, and ways of life
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Developing the ability to get along with different kinds of people
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Seeing the world from someone else's perspective
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Tolerating others with different beliefs
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Working cooperatively with diverse people
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly
12. What was your average grade in high school?  
{Choose one}
( ) A or A+
( ) B
( ) C
( ) D

13. What is your cumulative average grade now?  
{Choose one}
( ) A or A+
( ) B
( ) C
( ) D

14. What is your current classification at VCU?  
{Choose one}
( ) 1st year
( ) 2nd year
( ) 3rd year
( ) 4th year
( ) Unclassified

15. Where do you now live during the school year?  
{Choose one}
( ) Dormitory or other campus housing
( ) Residence (house, apartment, etc.) within walking distance of the institution
( ) Residence (house, apartment, etc.) within driving distance
( ) Fraternity or sorority house

16. Did either of your parents graduate from college?  
{Choose one}
( ) No
( ) Yes, both parents
( ) Yes, father only
( ) Yes, mother only

17. Your sex:  
{Choose one}
( ) Male
( ) Female

18. Is English your native language?  
{Choose one}
( ) No
( ) Yes
19. Are you: (Mark all that apply)
Choose one
( ) White/Caucasian
( ) African American/Black
( ) American Indian/Alaska Native
( ) Asian American/Asian
( ) Native Hawaiian/Pacific Islander
( ) Mexican American/Chicano, Puerto Rican, Other Latino
( ) Other

20. Are you enrolled (or enrolling) as a:
Choose one
( ) Full-time student
( ) Part-time student

21. If you are Asian-American, you are________________ in the United States.
Choose one
( ) 1st generation
( ) 2nd generation
( ) 3rd generation
( ) more than three generations
Appendix B

VCU Cross-Race Student-Faculty Interactions Faculty Survey

1. During the present term, how many hours per week on average do you spend on each of the following activities? (Mark one for each activity)

Meet with students during office hours
{Choose one}
( ) None
( ) less than 1
( ) 1-4
( ) 5-8
( ) 9-12
( ) 13-16
( ) 17-20
( ) 21-34
( ) 35-44
( ) 45+

Meet with students outside of class or office hours
{Choose one}
( ) None
( ) less than 1
( ) 1-4
( ) 5-8
( ) 9-12
( ) 13-16
( ) 17-20
( ) 21-34
( ) 35-44
( ) 45+

Communicating via email with students
{Choose one}
( ) None
( ) less than 1
( ) 1-4
( ) 5-8
( ) 9-12
( ) 13-16
( ) 17-20
( ) 21-34
( ) 35-44
( ) 45+
2. How many students are you teaching this semester:
   \{Choose one\}
   () 1-20
   () 21-40
   () 41-60
   () 61-80
   () 81-100
   () more than 100

3. Indicate the extent to which you agree or disagree with each of the following: (Mark one for each item)

   Faculty members are interested in students' personal problems at VCU
   \{Choose one\}
   () Strongly Disagree
   () Disagree Somewhat
   () Agree Somewhat
   () Strongly Agree

   Faculty at VCU are strongly interested in the academic problems of undergraduates
   \{Choose one\}
   () Strongly Disagree
   () Disagree Somewhat
   () Agree Somewhat
   () Strongly Agree

   Students understand what faculty expect of them academically
   \{Choose one\}
   () Strongly Disagree
   () Disagree Somewhat
   () Agree Somewhat
   () Strongly Agree

   Students feel very easy to know me
   \{Choose one\}
   () Strongly Disagree
   () Disagree Somewhat
   () Agree Somewhat
   () Strongly Agree

   It is easy for students to see me outside of regular office hours
   \{Choose one\}
   () Strongly Disagree
   () Disagree Somewhat
   () Agree Somewhat
   () Strongly Agree
I think interacting with undergraduate students has been a source of stress for me

{Choose one}
( ) Strongly Disagree
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Strongly Agree

4. Below are some statements about instruction of VCU faculty. Indicate the extent to which you agree or disagree with each of the following

Faculty have adapted their teaching to students with different cultures.

{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Students of different races and ethnicities often have different learning styles and good teachers will match their instruction to these learning styles.

{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

In some cultures, students are embarrassed to speak in front of others so I take this into account and don't call on these students in class.

{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

It is not fair to ask students who are struggling with English to take on challenging academic assignments.

{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly
5. Please indicate the extent to which you agree or disagree with the following statements: (Mark one for each item)

I have felt discriminated against from students based on my race/ethnicity
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

In class, I have heard students' stereotypes about my race/ethnicity
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

A racially/ethnically diverse faculty body enhances the educational experience of all students
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Faculty of color are treated fairly at VCU
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

I am satisfied with VCU racial/ethnic diversity of faculty
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly

Racial and ethnic diversity should be more strongly reflected in the curriculum at VCU
{Choose one}
( ) Disagree Strongly
( ) Disagree Somewhat
( ) Agree Somewhat
( ) Agree Strongly
6. Please rate your satisfaction with VCU on each of the aspects of college life listed below. (Mark one for each item)

Amount of contact with students
{Choose one}
( ) Very Dissatisfied
( ) Dissatisfied
( ) Neutral
( ) Satisfied
( ) Very Satisfied

Quality of contact with students
{Choose one}
( ) Very Dissatisfied
( ) Dissatisfied
( ) Neutral
( ) Satisfied
( ) Very Satisfied

VCU overall quality of instruction
{Choose one}
( ) Very Dissatisfied
( ) Dissatisfied
( ) Neutral
( ) Satisfied
( ) Very Satisfied

7. In your experience at VCU, during the current school year, about how often have you done each of the following?

Helped students improve their writing
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Gave prompt written or oral feedback to my students on their academic performance
{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often
Worked with students on activities other than coursework (committees, orientation, student life activities, etc.)

{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Talked with students about information related to a course they were taking (grades, make-up work, assignments, etc.)

{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Discussed with students their academic program or course selection

{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Discussed with students their ideas for a term paper or other class project

{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Discussed with students their career plans and ambitions

{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Socialized with students outside of class (had a snack or soft drink, etc.)

{Choose one}
( ) Never
( ) Sometimes
( ) Often
( ) Very Often
Students were guests in my home

(Choose one)
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Discussed ideas from students' readings or classes outside of class

(Choose one)
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

Worked with students on my research project

(Choose one)
( ) Never
( ) Sometimes
( ) Often
( ) Very Often

8. Select the circle that best represents the quality of your relationships with students: (1-7 level)
Unavailable, Unhelpful, Unsympathetic (1)--------Available, Helpful, Sympathetic(7)

(Choose one)
( ) 1
( ) 2
( ) 3
( ) 4
( ) 5
( ) 6
( ) 7

9. Overall, how would you evaluate the quality of academic advising you have given at VCU?

(Choose one)
( ) Poor
( ) Fair
( ) Good
( ) Excellent

10. How would you evaluate your students' entire educational experience at VCU?

(Choose one)
( ) Poor
( ) Fair
( ) Good
( ) Excellent
11. Your sex:
{Choose one}
( ) Male
( ) Female

12. Is English your native language?
{Choose one}
( ) No
( ) Yes

13. What is your present academic rank?
{Choose one}
( ) Instructor
( ) Lecturer
( ) Assistant Professor
( ) Associate Professor
( ) Professor

14. Are you: (Mark all that apply)
{Choose one}
( ) White/Caucasian
( ) African American/Black
( ) American Indian/Alaska Native
( ) Asian American/Asian
( ) Native Hawaiian/Pacific Islander
( ) Mexican American/Chicano, Puerto Rican, Other Latino
( ) Other

15. Do you have experience interacting with undergraduate students?
{Choose one}
( ) Yes
( ) No

16. How many years of teaching experience you have:
{Choose one}
( ) 0-3 years
( ) 4-6 years
( ) 7-10 years
( ) 11-15 years
( ) Over 15 years
Appendix C

VCU Cross-Race Student-Faculty Interactions Survey and Its Original Sources

<table>
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<th>No.</th>
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<th>CSEQ</th>
<th>CBS</th>
<th>NSSE</th>
<th>YFCEY</th>
<th>CIRP</th>
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</table>

Faculty thinks that in some cultures, students are embarrassed to speak in front of others. Then take this into account and don’t call on these students in class.

Faculty here is strongly interested in the academic problems of undergraduates.

Faculty here is strongly interested in students’ personal problems.

Faculty has adapted teaching to the distinctive cultures of African American, Latino, Asian, and Native American students.

Faculty thinks students of different races and ethnicities often have different learning styles and good teachers will match instruction to these learning styles and ethnicities.

Faculty is interested in students’ personal problems and their academic problems.

How many hours per week on average do you spend

<table>
<thead>
<tr>
<th></th>
<th>p.3</th>
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<tbody>
<tr>
<td>CSEQ</td>
<td>CBS</td>
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<tr>
<td>No.</td>
<td>CIRP</td>
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<td>-----</td>
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<tr>
<td></td>
<td>Faculty survey</td>
</tr>
<tr>
<td>21</td>
<td>Received prompt written or oral feedback from faculty.</td>
</tr>
<tr>
<td>12</td>
<td>Asked a faculty member for advice after class.</td>
</tr>
<tr>
<td>30</td>
<td>Racial and ethnic diversity should be more strongly reflected in the curriculum.</td>
</tr>
<tr>
<td>1</td>
<td>Faculty of color is treated fairly.</td>
</tr>
<tr>
<td>4</td>
<td>Amount of contact with faculty.</td>
</tr>
<tr>
<td>27</td>
<td>Racial and ethnic diversity should be more strongly reflected in the curriculum.</td>
</tr>
<tr>
<td>21</td>
<td>Faculty of color is treated fairly.</td>
</tr>
<tr>
<td>18</td>
<td>Overall quality of instruction.</td>
</tr>
<tr>
<td>10</td>
<td>Faculty survey</td>
</tr>
<tr>
<td>12</td>
<td>Received prompt written or oral feedback from faculty on my academic performance.</td>
</tr>
<tr>
<td>6</td>
<td>Faculty thinks it is not fair to ask students who are struggling with English to take on challenging assignments.</td>
</tr>
<tr>
<td>Activity Description</td>
<td>Survey Numbers</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Worked with faculty members on activities other than course work (committees, student life activities, etc.).</td>
<td>No. 7, No. 27, No. 28, No. 41</td>
</tr>
<tr>
<td>Discussed ideas from my readings or classes with a faculty member.</td>
<td></td>
</tr>
<tr>
<td>Socialized with a faculty member outside of class (had a snack or soft drink, etc.).</td>
<td>No. 11</td>
</tr>
<tr>
<td>Discussed my career plans and ambitions with a faculty member.</td>
<td></td>
</tr>
<tr>
<td>Discussed ideas for a term paper or other class project with a faculty member.</td>
<td></td>
</tr>
<tr>
<td>Work on professor’s project.</td>
<td></td>
</tr>
<tr>
<td>Discussed my academic program or course selection with a faculty member.</td>
<td></td>
</tr>
<tr>
<td>Assessed my work, grades, make-up work, course work (committees, student life activities, etc.).</td>
<td>No. 1, No. 21, No. 28</td>
</tr>
<tr>
<td>Talked with my faculty about information related to a course I was taking (grades, make-up work, etc.).</td>
<td>No. 11</td>
</tr>
<tr>
<td>Worked with faculty members on activities other than course work.</td>
<td></td>
</tr>
</tbody>
</table>

Appendix C - continued
Select the circle that best represents the quality of your relationships with faculty members: (1-7 level):

1. Unavailable, Unhelpful, Unsympathetic
2. Available, Helpful, Sympathetic

Overall, how would you evaluate the quality of your academic advising received at VCU?

Origin of the instrument: (1) The Cooperative Institutional Research Program (CIRP) Freshman Survey and Faculty Survey; (2) Your First College Year Survey (YFCY); (3) National Survey of Student Experience (NSSE); (4) College Student Experiences Questionnaire (CSEQ); (5) Common Belief Survey (CBS).
VITA

Yun Zhu was born on May 22, 1975, in Hubei Wuhan, P.R. China. She received her Bachelor of Arts in English education from Central China Normal University, Hubei, China in 1997. She also received a Master of Arts from Central China Normal University, Hubei, China in 2003. She taught English at Wuhan Physical Education University for 6 years.