

**CONVERGING FRAMEWORKS:  
EXAMINING THE IMPACT OF DIVERSITY-RELATED COLLEGE  
EXPERIENCES ON RACIAL/ETHNIC IDENTITY DEVELOPMENT**

by

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## **DEDICATION**

This dissertation is dedicated to my family whose unconditional love and support have sustained me, especially my belated Grandmother who knew me long before I knew myself.

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## **CHAPTER 1**

### **INTRODUCTION**

In the twenty-first century, the face of higher education is changing to reflect the demographic shifts in society. In 1976, only 16 percent of postsecondary students were minorities. According to Anderson (2003), 25 percent of all postsecondary students were persons of color by 1994, and the student of color population increased to 28 percent by 1999. From 1976 to 1999 the number of minorities enrolled in postsecondary institutions increased by 137 percent, compared with an increase of only 13 percent among whites (Anderson, 2003). During this period, African Americans increased by 59 percent while Hispanics and Asian Americans were responsible for the largest numerical increases (933,000 and 712,000, respectively) (Anderson, 2003). The increase among American Indians was also significant (360 percent); however, because the number of American Indian students enrolled in 1976 was so small the numerical growth from 1976 to 1999 was only 69,000 (Anderson, 2003).

Furthermore, projections indicate that by the year 2015, 8 percent of college students will be Asian American, 13 percent will be Hispanic, 15 percent will be African American, and 63 percent will be White (Carnevale & Fry, 2000). In addition, not only will there be greater numbers of ethnic and racial minorities, but there will also be more part-time and older students. These shifts in student demographics indicate that colleges and universities will be comprised of a greater number of students with a variety of

backgrounds and experiences. As a result, universities will be able to capitalize on this diversity to promote development in a range of cognitive and social outcomes.

Due to sustained demographic shifts, diversity has become embedded in higher education in myriad ways (hooks, 1994), thereby increasing the need for “knowledge about the differences and similarities in the [racial/ethnic] identity development of individuals within the groups as well as...one’s own social group identity” (Smith, 1996, p. 532). Learning, growing, and communicating in this complex, diverse context requires students to possess multicultural skills, knowledge, and awareness to be effective (Ibarra, 2001).

In 2003, the Supreme Court ruled that diversity in higher education is a compelling state interest, acknowledging that exposure to diversity promotes learning and development and provides skills essential for a global marketplace. Given the recent Supreme Court rulings, the discourse on diversity must now turn from legally defending the educational value of diversity to conceptualizing and maximizing the influences of diversity on student outcomes. Individual and institutional success rests on the ability of colleges and universities to value and harness the multitude of talents originating within various cultures, identities, ideologies, and backgrounds.

One of the central goals of higher education is to prepare graduates to live and work in a U. S. society in which one out of three Americans will be a member of a racial/ethnic minority group (Bok, 1986; Bowen, 1980). In order to achieve this goal, the same considerations leading the Court to recognize racial diversity as a compelling government interest in the context of higher education must compel both practitioners and researchers to take a greater interest in student outcomes related to diversity,

including racial/ethnic identity development. Increased awareness of the racial/ethnic identity development of diverse student groups enables both faculty and administrators to better address and improve the educational experiences of all students. Moreover, identity development serves as one of the important theoretical tools by which practitioners can understand diverse populations.

Despite the general acceptance that adolescence is a pivotal time in students' identity development, little has been done to explicate the relationship between identity development and college experience or the identity development process for ethnically diverse students (Chickering & Reisser, 1993). The increasingly pluralistic context of higher education has received limited attention with regards to students' racial/ethnic identity development. Few studies have examined diversity as it pertains to co-curricular and curricular experiences of students from varied racial/ethnic backgrounds. Furthermore, the majority of studies are limited to a single racial/ethnic group and do not attempt to examine multiple racial/ethnic groups simultaneously. Based on the shift in demographics and burgeoning racially/ethnically diverse college population, the topic of racial/ethnic identity is of sufficient importance to warrant serious research attention (Phinney, 1990).

### **Purpose and Scope of the Study**

Increased diversity on campus has changed not only the racial/ethnic composition of the student body but also the nature of research on student change. Two distinct theories, college impact theory and developmental theory, have emerged to investigate college student change; however, some researchers (Stage, 1987) continue to stress the need for a more integrated examination of college student change. The purpose of this

study, therefore, is to advance the work of college impact and identity development theorists by investigating the usefulness of an integrated model that considers key aspects of both theories. In addition to the college environment, this particular study seeks to examine the psychosocial changes that lead to diversity-related growth. Specifically, this study will examine how aspects of racial/ethnic identity development (i.e., sense of common fate, race centrality, and shared racial/ethnic values) are influenced by diversity-related college experiences. The three research questions that will guide this study are as follows:

- a) How do diversity-related college experiences affect the racial/ethnic identity development of White, Asian Pacific American, Latino and African American students?
- b) What is the relationship between racial/ethnic identity development and the frequency and types of interaction with diverse peers?
- c) Does a significant difference exist in the racial/ethnic identity development of White, Asian Pacific American, Latino, and African American students?

In the past, researchers have explained student growth outcomes by focusing solely on individual experiences and environments without considering the psychological dimensions that help define and frame these experiences. Realizing that “the individual plays a central role in determining the extent and nature of growth” (Pascarella & Terenzini, 1991), it is worth examining racial/ethnic identity development using an integrated framework that takes into consideration multiple dimensions of racial/ethnic identity, participation in diversity-related experiences, and the college environment. Due to the fact that limited empirical attention has been given to the relationship between

racial/ethnic identity development and diversity-related college experiences, the present study is exploratory in nature. This investigation is guided primarily by theory and is focused on serving as a foundation for future research and learning.

### **Significance of the Study**

As the United States becomes increasingly diverse, and the market continues to globalize, it is of great importance that college students develop skills to interact with people of cultural backgrounds different than their own. The building of such skills is heavily dependent upon students' level of self-awareness and identity development. Thus the current examination of racial/ethnic identity and the ways in which it develops among college students is an important area for researchers in higher education to study.

This study is further meaningful in that it investigates the relationship between multiple dimensions of racial/ethnic identity, diversity-related college experiences, and the college environment. By measuring different aspects of racial/ethnic identity, including sense of common fate, race centrality, and shared racial/ethnic values, this study seeks to extend former conceptualizations of racial/ethnic identity while serving as an exploratory investigation of the potential relationship between racial/ethnic identity development and diversity-related college experiences.

In sum, exploring the relationship between racial/ethnic identity, college experiences, and college environment is significant because it can potentially offer new, detailed information as to how students develop their racial/ethnic identity. Ultimately, the findings of this study should provide valuable information to the field of higher education, particularly those individuals and departments charged with promoting and supporting students' identity development.

## Relevant Terminology

Prior to the examining the literature, it is important to cover the terminology used in this study. For the purposes of this study, the following definitions are offered as a tool for understanding the complexity and nuances of racial/ethnic identity development (Torres, Howard-Hamilton, & Cooper, 2003):

- *Acculturation* refers to changes in attitudes, behaviors, values, and cultural identity as a result of prolonged intercultural contact (Berry, Trimble, & Olmedo, 1986). It does not assume non-affiliation with own group.
- *Assimilation* is the process of change that occurs when a racial/ethnic minority adopts the culture of the majority or host and is fully incorporated into that culture's social, economic, and political institutions.
- *Culture* describes the enduring behaviors, ideas, attitudes and traditions shared by a large group of people and transmitted from one generation to the next. Culture, on a broad level, provides individuals with an identity that represents a particular group of people.
- *Ethnicity* is a social identity derived from an individual's historical nationality or tribal group. Any one racial group is comprised of many ethnicities (Helms, 1994).
- *Race* deals with how humankind creates socially defined differences by socially categorizing the hereditary traits of different groups of people. These categories are based on traits that are biologically visible and deal mainly with skin color and physical difference.



- *Social group* is used to describe membership in a socially defined segment of the population considered to be outside of the majority, including membership groups according to ethnicity, gender, social class or sexual orientation.

### **Summary**

This chapter underscores the importance of examining racial/ethnic identity development in a context that supports diversity-related college experiences. Changing student demographics not only affect the campus climate and culture, it also affects the ways in which students see themselves and experience their multiple identities. Chapter 2 of this dissertation provides a review of the literature relevant to this study. It includes literature regarding theories of identity development, racial/ethnic identity models, and research related to racial/ethnic identity development and relevant constructs. Chapter 3 discusses the methodology of the study including the conceptual framework, research design, data collection process and sample, and survey data preparation. Chapter 4 presents the results of the study and Chapter 5 provides a discussion of findings and recommendations.

## **CHAPTER 2**

### **REVIEW OF THE LITERATURE**

This study explores the relationship between racial/ethnic identity development and diversity-related college experiences. The review of the literature provides a closer examination of the relevant terminology, theories of identity development, models of racial/ethnic identity development, and dimensions of racial/ethnic identity which have served to guide numerous studies of identity development, including this study. This chapter opens with a review of four relevant terms: race, racial identity, ethnicity, and ethnic identity. This section of the literature review is meant to further clarify and define the terminology undergirding this study. Next, my review of the literature turns to the theories, models, and dimensions of identity development and racial/ethnic identity development. This chapter concludes with a review of the empirical investigation of racial/ethnic identity development as it relates to multiple student groups, diversity-related college experiences and interactions with diverse peers.

#### **Review of Terminology**

##### *Race and Racial Identity*

Race is a concept that involves both a biological and social component. The biological definition focuses on the physical appearance of human beings such as skin color and facial features (Atkinson, Morten, & Sue, 1998). Skin color is one of many labeling tools that individuals and groups use to distance themselves from others

considered to be different (Chavez, Guido-DiBrito, & Mallory, 2003). Omi and Winant (1994) argue:

Although the concept of race invokes biologically based human characteristics (so called “phenotypes”), selection of these particular human features for purposes of racial signification is always and necessarily a social and historical process.

As a social construct, race is viewed as a politically oppressive categorization scheme that individuals must negotiate while creating their identities. Four distinguishable racial groups are thought to exist in the United States: Asian, Black, White, and Native American; Latino is often treated as a fifth racial group, although its members exhibit all the “racial” characteristics of the other four (Helms, 1994).

The concept of racial identity is defined as the individual’s internalization of race due to his or her racial socialization. Meanings of racial identity, similar to those of race, have been constructed through the use of its biological and social dimensions. As a biological category, racial identity is based on an individual’s physical features. As a social construct, racial identity “refers to a sense of group or collective identity based on one’s perception that he or she shares a common heritage with a particular racial group” (Helms, 1993, p.3). However, racial identity is most often viewed as a frame which individuals use to categorize others, often based on skin color (O’Hearn, 1998).

#### *Ethnicity and Ethnic Identity*

The term *ethnicity*, similar to race, carries multiple connotations. In the broad sense, ethnicity is determined by cultural or physical characteristics. However, the narrow definition of ethnicity involves group differences based on customs, language, religion, and other cultural factors that are not biologically defined (Atkinson et al., 1998).

Currently, the definition of ethnic identity that is most widely used is the one developed by Phinney (1990, 2000, 2003). According to Phinney (2003), “ethnic identity is a dynamic, multidimensional construct that refers to one’s identity, or sense of self as a member of an ethnic group” (p. 63). Based on her definition, individuals claim an identity within the context of a subgroup that has a common ancestry and shares at least a similar culture, race, religion, language, kinship, or place of origin. Phinney continues by stating, “Ethnic identity is not a fixed categorization, but rather a fluid and dynamic understanding of self and ethnic background.” (2003, p. 63).

Like racial identity, ethnic identity is often considered to be a social construct. However, in contrast to racial identity which is constructed in response to others using one’s ascribed racial classification, ethnic identity is constructed based on one’s perceived country or culture of ancestral origin. Ethnic identity most often represents a construct by which individuals identify consciously or unconsciously with others who share a common bond because of similar traditions, behaviors, values, and beliefs (Ott, 1989).

As previously noted, race is an externally imposed social construct, whereas ethnicity is a self-imposed social construct. The terms *race* and *ethnicity* both play an important role in self-identification. A review of the literature suggests that the definitions of these terms are varied, causing race and ethnicity to be viewed as ambiguous concepts that can at times be used interchangeably (Atkinson, et al., 1998). In this study, the terms are used collectively (i.e. *race/ethnicity*) with the understanding that at times race/ethnicity may apply more aptly to conceptions of race and at other times to ethnicity. This approach is deemed appropriate because: 1) the original study, from

which this study emanates, does not attempt to distinguish between race and ethnicity; and 2) the scope of this dissertation limits the ability to fully examine and elaborate on the varied definitions of these two terms.

### **Theories of Identity Development**

Theories of identity development have emerged from both developmental and social psychology with racial/ethnic identity development being situated at their intersection. Interest among developmental psychologists stems from Erikson's (1968) work which identified the search for and development of one's identity as the critical task of adolescence. According to Erikson's (1968) identity development theory, the process of exploration and commitment is essential for forming a healthy identity. Rather than examine the developmental aspects of identity, social psychologists focus on the individuals' social identity as it relates to: 1) the value society has placed on one's group membership (i.e., social identity theory); and 2) the changes that occur as a result of contact with other groups (i.e., acculturation theory). Following is a more focused review of the three prominent theories of identity development, including social identity theory, acculturation theory, and identity development theory.

#### *Social Identity Theory*

The framework of social identity has been utilized to conduct much of the research on ethnic identity. Social identity theory was developed in the late 1970s by Henri Tajfel and John Turner (Tajfel, 1970, 1981, 1982; Tajfel & Turner, 1979). Tajfel (1982) contends that social identity serves to create a psychological link between the sense of self and identification with an in-group. Social identity, according to Tajfel (1981, p. 255), is "that part of an individual's concept which derives from his knowledge

of his membership of a social group (or groups) together with the value and emotional significance attached to that membership". As a result of perceived commonalities, individuals make comparisons between and among groups. By comparing the relative value of one's group to another group, an individual is able to garner positive or negative values of the self.

In three of the developmental models described below (i.e., *Cross' Model of Psychological Nigrescence*; *Atkinson, Morten, and Sue's Minority Identity Development Model*; and *Kim's Asian American Identity Development Model*) individuals derive a social identity through collective-level identification. In each of these models, an encounter, or series of encounters, causes the individual who initially identified with white culture to realize that differences exist between self and other. Consequently, they begin to seek identification with their own group and reject identification with white culture. Thus, though an individual initially valued the dominant group culture and attempted to gain access into that group, they now value their own ethnic group and a new group membership which provides positive aspects to their identity. In summary, social identity theory provides a theoretical explanation for why individuals prefer ethnic group membership over dominant group membership, and how inter-group comparisons aid them in developing a positive ethnic identity.

#### *Acculturation Theory*

Acculturation theory addresses the process by which minority group members change and become more like majority group members. Changes can normally be seen in cultural attitudes, values, and behaviors when two or more ethnic groups are in contact over a period of time (Berry, et al., 1986). Racial/ethnic identity becomes a meaningless

concept in environments that are ethnically or racially homogenous. When utilizing the acculturation framework, researchers focus on the group rather than the individual and question how minority or immigrant groups relate to the dominant or host society.

Two distinct models have been used to investigate acculturation, including a bipolar model and a two-dimensional model (Phinney, 1990). Ethnic identity, in the linear model, is conceptualized along a continuum from strong ethnic ties at one extreme to strong mainstream ties at the other. This model assumes that a strong ethnic identity is not possible among those who become involved in the mainstream society, and acculturation is inevitably accompanied by a weakening of ethnic identity.

Unlike the linear model, the two-dimensional model of acculturation takes into consideration the individual's relationship with the traditional or ethnic culture, as well as their relationship with the new or dominant culture. These two relationships may also be independent. According to this view, a strong ethnic identity does not necessarily imply a weak relationship or low involvement with the dominant group, and minority group members can have either strong or weak identification with both their own and the mainstream cultures.

### *Identity Development Theory*

Erikson's (1959) theory of identity development was the first theory of development that encompassed the entire life cycle. This theory serves as the basis for models of racial/ethnic identity development (Evans, Forney, and Guido-DiBrito, 1998). Erikson's eight-stage theory (see Table 2.1) is characterized by conflicts which individuals must experience and resolve in order to develop a healthy personal identity. If the conflict is resolved in a constructive, satisfactory manner, the positive quality

becomes the more dominant part of the ego and enhances the personal identity.

However, if the conflict is resolved unsatisfactorily, the negative quality is incorporated into the personality structure and impairs further development. Identity issues remain a lifelong concern, although the conflict or “identity crisis” is most pronounced during adolescence.

The first four stages of Erikson’s theory are considered to be the foundation for identity development (Evans et al., 1998). Stage 1 (*basic trust versus mistrust*) involves establishing basic trust which is rooted in the quality of care during infancy and the relationship with the primary caregiver. Stage 2 (*autonomy versus shame and doubt*) and Stage 3 (*initiative versus guilt*) are characterized by feelings of confidence and self-control along with the ability to pursue goals despite the possibility of failure. Finally, in Stage 4 (*industry versus inferiority*), children develop the competence needed to master new tasks and skills successfully. The first four stages of Erikson’s framework create a foundation for negotiating the remaining stages.

Stage 5 (*identity versus identity diffusion*) represents the transition between childhood and adulthood when a meaningful self-concept must be established. According to Evans et al. (1998), the final three stages of Erikson’s theory (*intimacy versus isolation*, *generativity versus stagnation*, and *integrity versus despair*) deal with how one interprets love, care, and wisdom after identity formation is resolved.

The first attempts to submit Erikson’s theory to empirical tests began with Marcia’s (1980) model of adolescent identity development. This model utilized two constructs to describe identity formation, including exploration and commitment. The beginning of the exploration phase happens when one questions the goals and values that



**Table 2.1 Erikson's Stages of Psychosocial Development**

<b>Stage</b>	<b>Basic Conflict</b>	<b>Important Events</b>	<b>Outcome</b>
<b>Stage 1</b> Infancy (birth to 18 months)	Trust vs. Mistrust	Feeding	Children develop a sense of trust when caregivers provide reliability, care, and affection. A lack of this will lead to mistrust.
<b>Stage 2</b> Early Childhood (2 to 3 years)	Autonomy vs. Shame and Doubt	Toilet Training	Children need to develop a sense of personal control over physical skills and a sense of independence. Success leads to feelings of autonomy, failure results in feelings of shame and doubt.
<b>Stage 3</b> Preschool (3 to 5 years)	Initiative vs. Guilt	Exploration	Children need to begin asserting control and power over the environment. Success in this stage leads to a sense of purpose. Children who try to exert too much power experience disapproval, resulting in a sense of guilt.
<b>Stage 4</b> School Age (6 to 11 years)	Industry vs. Inferiority	School	Children need to cope with new social and academic demands. Success leads to a sense of competence, while failure results in feelings of inferiority.
<b>Stage 5</b> Adolescence (12 to 18 years)	Identity vs. Role Confusion	Social Relationships	Teens need to develop a sense of self and personal identity. Success leads to an ability to stay true to yourself, while failure leads to role confusion and a weak sense of self.
<b>Stage 6</b> Young Adulthood (19 to 40 years)	Intimacy vs. Isolation	Relationships	Young adults need to form intimate, loving relationships with other people. Success leads to strong relationships, while failure results in loneliness and isolation.
<b>Stage 7</b> Middle Adulthood (40 to 65 years)	Generativity vs. Stagnation	Work and Parenthood	Adults need to create or nurture things that will outlast them, often by having children or creating a positive change that benefits other people. Success leads to feelings of usefulness and accomplishment, while failure results in shallow involvement in the world.
<b>Stage 8</b> Maturity (65 to death)	Ego Integrity vs. Despair	Reflection on Life	Older adults need to look back on life and feel a sense of fulfillment. Success at this stage leads to feelings of wisdom, while failure results in regret, bitterness, and despair.

[http://psychology.about.com/library/bl\\_psychosocial\\_summary.htm](http://psychology.about.com/library/bl_psychosocial_summary.htm)

have been defined by one's parents. This questioning may or may not create a crisis or decision-making period (Marcia, 1980). After a crisis period, a person experiences personal investment or ownership of his or her chosen goals and values and eventually commitment develops.

Marcia (1980) proposed four distinct "identity statuses" to describe the process of identity development. During the first status, *identity achievement*, adolescents have experienced a crisis and committed to certain values or roles. In the second status, *identity moratorium*, individuals are currently in a crisis but have not made a commitment or lack the desire to make decisions. *Identity foreclosure* represents the third status of Marcia's identity statuses. Adolescents in this status have made a commitment without having gone through a crisis. The fourth and final status, *identity diffusion*, relates to adolescents who are not currently going through a crisis and have not made a commitment. Individuals in this stage may feel overwhelmed by the task of identity development and seek to avoid exploration and commitment. Based on Marcia's model of adolescent identity development, individuals benefit from supportive parents, schools, and communities that encourage the exploration and commitment needed for identity achievement.

Like Marcia, Chickering and Reisser (1993) used Erikson's theory as the basis of their theory of student development, which proposes that identity development is a fundamental developmental issue during the college years. They define identity development as a series of tasks or stages, including qualitative changes in thinking, feeling, behaving, valuing, and relating to others and to oneself. According to Chickering and Reisser's (1993) theory, students resolve identity issues by successfully completing

seven specific tasks (vectors): developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity. They posit that developing a healthy identity creates clarity, stability, and positive feelings about oneself and others. For example, tolerance for racial and ethnic differences increases when students develop intimate and mature interpersonal relationships (Chickering & Reisser, 1993).

The three theories outlined above describe social identity theory (Tajfel, 1982), acculturation theory (Berry, et al., 1986) and identity development (Erikson, 1968), respectively. Of these theories, Erikson's identity development theory serves as the most influential and comparable theory to those investigating racial/ethnic identity development. Similar to Erikson, racial/ethnic identity theorists emphasize the importance of crises in which individuals reexamine previously held racial/ethnic attitudes, beliefs, and values (Cross, 1991; Hardiman, 1994; Helms, 1990; Phinney, 1990). The next section will be used to discuss the various models of racial and ethnic identity development that have been applied to college students followed by a review of dimensions used to study racial/ethnic identity.

### **Models of Racial/Ethnic Identity Development**

This section of the literature review draws attention to models of racial/ethnic identity development which have been applied to the study of college students. Five models have been used extensively in higher education research including the Nigrescence Model (Cross, 1971), White Racial Identity Development Model (Helms, 1995), Cultural Identity Development Model (Phinney, 1991), Minority Identity

Development Model (Atkinson, et al., 1998) and Asian American Identity Development Model (Kim, 1981). These models, described in detail below, generally rely on a progression from conformity with majority (white) culture through stages (or “statuses”) of dissonance and resistance to an immersion in minority culture, ending by integrating racial/ethnic identity with other aspects of the person’s self-definition (Atkinson, et al., 1998; Cross, 1991, 1995; Helms, 1990, 1995).

#### *Cross’ Model of Psychological Nigrescence*

Cross’ Nigrescence model provides a cognitive-developmental framework from which to understand the Black racial identity process. This model includes five stages in which uniquely different values, attitudes, opinions and affective states are reflected: (a) Pre-Encounter, (b) Encounter, (c) Immersion/Emersion, (d) Internalization, and (e) Internalization-Commitment (Cross, 1995). The original Nigrescence model has been expanded and elucidated by Cross (Cross, 1991, 1995; Cross & Vandiver, 2001). More recent explanations of this stage paradigm have provided delineations of the *Pre-Encounter*, *Immersion-Emersion*, *Internalization*, and *Internalization-Commitment* stages and placed somewhat less emphasis on *Encounter* as a stage.

In the *Pre-Encounter* stage of development, Black individuals are likely to define themselves by on criteria other than race since race may hold little salience. At this stage, individuals may work to deny their "Blackness" by aligning themselves with Whites, whom they see as the ideal (Cross, 1994, 1995; Helms, 1995). Because of negative incongruous experiences (e.g., discrimination) or positive incongruous experiences (e.g., positive cultural messages), people at this stage begin to question their beliefs. This questioning of *Pre-Encounter* stage beliefs marks the *Encounter* stage. During the

*Encounter* stage, formerly accepted truths regarding the inferiority of Blacks are called into question, causing the salience of racial being to increase and denial to decrease. Confusion is common among individuals in this stage who find that they are struggling to reconcile the dissonance resulting from new perceptions of their socioracial group (Cross, 1994, 1995; Helms, 1995; Parham & Austin, 1994).

Individuals in the *Immersion/Emersion* stage are characterized as being engaged in an inner battle of identities. These individuals experience emotional highs and lows and often hold extreme positions on relevant topics (Cross, 1994). According to Helms and Parham (1996), individuals at this stage may see themselves in a somewhat grandiose manner, and they may behave in ways perceived to be opposite of "White" behavior. The next stage, *Internalization*, is occupied by individuals who have developed comfort in their socioracial group identity. These individuals tend to be more sophisticated in their cognitive and behavioral responses to racism (Cross, 1995; Helms, 1995). Their greater acceptance of self and of others of differing races and cultural worldviews of leads them to become bicultural or multicultural. In addition to race, other aspects of identity (e.g., religion, gender, social class) may become salient in the *Internalization* stage (Cross, 1995). *Internalization-Commitment* is the final stage in which individuals extend their racial acceptance to other groups, and integration occurs in a more fluid manner. This stage is characterized by a great deal of ideological diversity and the consistent use of personal identity as a catalyst for action (Cross, 1995).

#### *Helms' White Racial Identity Development Model*

Although the racial identity construct emerged from research and theory based on models of Black identity, models of White racial identity development have also been

proposed (Helms, 1990; Rowe, Bennett, & Atkinson, 1994). Elaborating on Cross' model of psychological Nigrescence, Helms (1990) conceptualized racial identity development as a succession of appraisals that people make about themselves and others as racial beings. Helms' developed a six-stage model to explain the process by which Whites develop a healthy racial identity as they experience greater interaction with non-Whites and therefore confronted racial issues and conflicts. The six stages of Helms' (1990) model include:

- a) Stage one—*contact or obliviousness to one's own racial identity*: The contact stage is entered when the person becomes aware that Black people exist. The person will approach Black people with feelings of curiosity and then choose to interact or not interact with Black people;
- b) Stage two—*disintegration, or first acknowledgement of White identity*: The person is forced to acknowledge that they are White. The acknowledgement is accompanied by feelings of guilt and depression as the person becomes aware that racism exists and that they are more or less conforming to White racial norms;
- c) Stage three—*reintegration, or idealizing whites and denigrating Blacks*: The person becomes hostile toward Blacks and more positively biased toward their own group. Individuals in this stage struggle with moral dilemmas associated with race and may avoid cross-racial interactions;
- d) Stage four—*pseudo-independence, or intellectualized acceptance of own and others' race*: A person engages in an active redefinition of Whiteness and acknowledgement of the responsibility of Whites for racism. They develop an

intellectual acceptance and curiosity about Blacks and whites. Cross-racial interactions are possible, but may be limited to a few Black people who are perceived as being similar to whites;

- e) Stage five—*immersion/emersion, or honest appraisal of racism and significance to whiteness*: A person replaces white and Black stereotypes and myths with accurate information about what it means to be white in the United States; and
- f) Stage six—*autonomy*: In this stage a person internalizes a multicultural identity with non-racist whiteness as its core. They actively take steps to eliminate racism and other forms of oppression.

Racial/ethnic identity development is different for whites and people of color, but a common premise in all of Helms' models is that the final status of development for all racial/ethnic beings entails an increased ability to work through the dehumanizing impact of racism on perceptions of one's self and others. The person must learn that in the construction of racialized societies, there is a magnification of the accomplishments and virtues of influential dominant group members, particularly wealthy, white, heterosexual males, and a minimization of the accomplishments and virtues of subordinate group members (Helms, 1990). This construction also entails minimizing the fallibilities and misdeeds of dominant group members as opposed to the frailties, misdeeds, and vulnerabilities of subordinate group members. History lessons are mistold and contexts are selectively distorted. In essence, this development depends in part on recognizing the wrongful deeds that feed the construction through critical learning.

Although several studies have found support for her stage model (Tokar & Swanson, 1991; Helms, 1990), Helms' (1990) measure has received considerable

criticism (Rowe et al., 1994; Swanson, Tokar, & Davis, 1994). Critics argue that Helms' (1990) conceptualization of White racial identity is too focused on attitudes toward another group (Whites' attitudes about Blacks) and that data do not support distinct developmental stages.

#### *Phinney's Model of Ethnic Identity*

In response to criticisms of Helms' (1990) scale, Phinney (1991) proposed a measure of ethnic identity that conceptualizes development along a continuum and measures the aspects of ethnic identity that are common to all groups. She argued that ethnic identity is a construct that varies across individuals and represents the process of identity formation within an individual. According to Phinney, ethnic identity development begins with a complete lack of exploration and ends when the individual comes to terms with ethnic issues and accepts himself or herself as a member of an ethnic group. Phinney (1990) proposed that individuals who have spent time reflecting on racial issues, coming to terms with their own ethnic group membership, and interacting with members of other groups, will achieve a more complex ethnic identity. When an individual engages in increased self-exploration, he or she is more likely to compare options and make conscious decisions about how to deal with racial issues and conflicts when confronted with them.

Phinney's (1991) model assumes that once achieved, group identity will remain relatively consistent throughout the life course. The identity stages that Phinney discusses in her model are *Diffuse/Foreclosed*, *Moratorium*, and *Achieved*. Phinney's first stage, *Diffuse/Foreclosed*, consists of a combination of two identity states. Diffused individuals have little understanding of their ethnic identity and have not had to address



issues of ethnicity. As a result, their ethnicity is not important to them, and they do not possess a clear understanding of the meaning of ethnicity. However, those individuals who understand the concept of ethnicity, but have not explored their ethnic identity are considered foreclosed. Accepting the ethnic identity that has been expressed by their families, these individuals do not question the values and ideas to which they have been exposed. These values and ideas may lead individuals to develop either negative or positive views of their ethnic group.

Individuals who actively search for meaning in their ethnic group identity but have not yet accepted a particular meaning are characterized by the *Moratorium* stage. A person in this stage experiments and seeks different ways to understand their identity. They spend an extensive amount of time discussing race with friends, reading books on race and ethnicity, and expressing their awareness of racial prejudice and discrimination. The final stage of Phinney's model, *Achieved* stage, occurs when individuals have searched for the personal meaning of their ethnic identity and found one that they embrace. This identity state is characterized by individuals' deeper sense of belonging to the group, clearer understanding of their group, and acceptance of the group.

#### *Atkinson, Morten, and Sue's Minority Identity Development Model*

Like the preceding racial/ethnic identity models, Atkinson et al.'s (1998) model is based on psychological perspectives. Similar to Phinney, Atkinson et al. (1998) conceptualize the model as covering all of the minority groups in the United States and not just Blacks and whites. The authors claim that although each of the ethnic minority groups has a unique culture, the fact that they have been subjected to various forms of

physical, economic and social discrimination suggests that they share a common experience that affects how they view themselves and others.

Based on earlier studies of oppressed groups, Atkinson et al. (1998) developed a five-stage Minority Identity Development (MID) model. Although changes in attitudes and subsequent behavior usually follow a predictable sequence, they suggest that the model should be viewed as a schema to better understand minority individuals' attitudes and behaviors, rather than as a comprehensive theory of personality development. Atkinson et al. (1998) contend that the MID is more accurately conceptualized as a continuous process in which one stage blends with another.

In the first stage of the model (*Conformity*), minorities prefer dominant cultural values over those of their own. To those individuals, there is a high desire to assimilate to the dominant society. For example, individuals in the minority may consider their own physical traits as less desirable and their cultural values as a deficit. Their attitudes toward other minorities tend to be highly negative. In addition, they view other minority groups according to the dominant group's system of minority stratification (i.e., those minority groups that most closely resemble the dominant group in physical and cultural characteristics are viewed more favorably than those less similar). Finally, their attitudes towards members of the dominant group tend to be highly appreciative. In the second stage (*Dissonance*), a person's attitude towards self, member of one's own group, and members of the dominant group are in conflict between self-depreciating and self-appreciating. The attitude towards members of a different minority is a conflict between dominant-held views of minority stratification.

During the third stage (*Resistance and Immersion*), the individuals completely support minority-held views and reject the dominant society and culture. Feelings such as guilt and anger are common for individuals in this stage as they begin to: explore their history, identify with their minority group and other minority groups, and distrust the dominant group. The fourth stage (*Introspection*) is characterized by the minority individual questioning some of the held beliefs (e.g., “All whites are bad”) of the previous and re-channeling attention to higher individual autonomy. Finally, minority individuals in the fifth stage (*Synergistic Articulation and Awareness*) experience a sense of self-fulfillment in terms of their cultural identity. Conflicts experienced in the *Introspection* stage have been resolved, allowing greater individual control and flexibility. Individuals in this stage are able to carefully examine and accept or reject the dominant and other minority groups’ cultural values.

Atkinson et al.’s model (1998) provides a broader scope for examining the interaction between minority groups and the dominant group in the United States. Although this model follows a stage-like format, the authors emphasize that the stages are not hierarchical and that not everyone achieves the final stage in their identity formation. With this model it is important to note that it only draws on the experiences of native-born minorities without taking into account the experiences of the foreign-born (e.g., immigrants and refugees). Also, this model has not been employed in practice to adequately determine if it is applicable to all ethnic minorities in the United States.

#### *Kim’s Asian American Identity Development Model*

Consistent with Atkinson et al.’s reasoning, Kim (1981, 2001) views identity conflict as one of the most critical psychological issues faced by Asian Americans.

Identity conflict occurs when an individual simultaneously perceives and rejects certain self-attributes. Such conflict occurs for Asian Americans when they reject their Asian identity in favor of identification with white symbols and images. The concern is not the lack of ethnic awareness but feelings about that aspect of oneself (Kim, 1981, 2001).

Kim's model consists of five stages of Asian American ethnic identity development:

*Ethnic Awareness (EA), White Identification (WI), Awakening to Social Political Consciousness (ATSPC), Redirection to Asian American Consciousness (RTAAC), and Incorporation (I).*

Stage 1, *Ethnic Awareness (EA)*, occurs prior to kindergarten and elementary school. During this stage, the individual is aware of their Japanese descent and exhibits an attitude ranging from neutral to positive towards their ethnicity. The neutral to positive attitude relates to the individual's self-concept and ego identity as a Asian American, as well as their exposure and participation in Japanese ethnic activities. However, the individuals' perception of self is negatively affected when the individual enters school and is exposed to an environment that increases their contact with white society. This increased contact between the individual and whites leads them into the next stage.

Stage 2, *White Identification (WI)*, is a direct consequence of the increase in significant contact between the individual and white society. Individuals in this stage have the sense of being different from other people and not belonging anywhere. Their self-perception changes from neutral/positive to negative and they begin to internalize the belief systems of white society. Consequently, the individual fails to question what it means to be Asian American and alienates themselves from other Asian Americans,

while simultaneously experiencing social alienation from their white peers. In order to move to the next stage, the individual must acquire a political understanding of social status.

In Stage 3, *Awakening to Social Political Consciousness (ATSPC)*, the individual acquires a different perspective on who they are in this society. The process by which this political consciousness is acquired varies by individual. However, Kim notes that significant changes in perspective occur via involvement in a political movement. The individual begins to shift their self-concept from negative to positive as they become exposed to people who work on social issues. The range of political activities that the individual participates in varies (e.g., reading and taking courses on racism and the Asian American experience, being a member of political discussion groups and women's support groups, attending demonstrations, etc.). During this stage, the individual's identity centers on being a minority, being oppressed, not being inferior, and feeling connected to experiences of other minorities and shifts from feeling alienated and inferior.

In stage 4, *Redirection to Asian American Consciousness (RTAAC)*, the individual changes his or her identification from minority to that of an Asian American. In an attempt to better understand Asian American people, the individual becomes immersed in the Asian experience, which could involve spending a lot of time in the Asian American community or simply reading about Asian American history and culture. The goal is to distinguish between the Asian and American parts of self. This stage is marked by intense negative emotions directed at whites and at racism (Kim, 1981). With time,

however, these emotions diminish and the individual learns to acknowledge and deal with racism while feeling comfortable and proud to be an Asian American.

Lastly, in stage 5, *Incorporation (I)*, the individual maintains his or her identity as an Asian American while relating to different groups of people (Kim, 1981). The individual realizes that being Asian American is part of their identity and not their sole identity. In addition, they are no longer threatened by prevailing white values because of his or her strong sense of self. It is during this stage that the individual's Asian identity begins to blend in with the rest of their identities.

Table 2.2 (see below) provides an overview of the racial/ethnic identity development models described above. It outlines the key stages for each model and emphasizes the similarities between these stages. Besides the described models of racial/ethnic identity development, various measures have been developed to effectively research questions relating to racial/ethnic identity development. The section below reviews these dimensions of racial/ethnic identity and the ways they have been assessed.

**Table 2.2 Racial/Ethnic Identity Development Models**

Author	Stage					
	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
<b>Cross</b>	<i>Pre-Encounter:</i> Identification with white culture; little knowledge of own culture	<i>Encounter:</i> Rejects identification with white culture; seeks identification with black culture	<i>Immersion-Emersion:</i> Complete identification with black culture; intense negative feelings towards whites	<i>Internalization:</i> Internalization of black culture; individual standpoint to identification of other oppressed groups	<i>Internalization-Commitment:</i> Prolongment of Internalization Stage	
<b>Helms</b>	<i>Contact:</i> Obviousness to own racial identity; Encounter the idea or actuality of people of color	<i>Disintegration:</i> Acknowledgment of white identity	<i>Reintegration:</i> Idealization of whites; denigration of blacks	<i>Pseudo-Independent:</i> Intellectualized acceptance of own and others' race; questions racism	<i>Immersion/Emersion:</i> Honest appraisal of racism and significance of whiteness	<i>Autonomy:</i> Internalizes a multi-cultural identity with non-racist whiteness as one's core
<b>Phinney</b>	<i>Diffusion:</i> Lack of interest in or concern with ethnicity	<i>Foreclosure:</i> Views of ethnicity based on opinions of others	<i>Moratorium:</i> Involvement in exploring and seeking to understand meaning of ethnicity for oneself	Continued involvement in exploring and seeking to understand meaning of ethnicity for oneself	<i>Achieved:</i> Clear, confident sense of own ethnicity	
<b>Atkinson, Morten, &amp; Sue</b>	<i>Conformity:</i> Prefer dominant culture over own	<i>Dissonance:</i> Encounters information or experiences which challenge previous beliefs acquired in previous stage	<i>Resistance and Immersion:</i> Endorses minority-held views and rejects dominant society and culture; desire to eliminate oppression of own group	<i>Introspection:</i> Feelings of discomfort with dominant group views; diverts attention to notions of greatest individual autonomy	<i>Synergetic Articulation and Awareness:</i> Values ethnic self, other cultures and dominant group, desire to eliminate all forms of oppression	
<b>Kim</b>		<i>White Identification:</i> Realization of differences; alienation from self and other Asian Americans; social alienation for whites	<i>Awakening to Social Political Consciousness:</i> Gain new political perspective; identification with minority status	<i>Redirection to Asian American Consciousness:</i> Personal and cultural exploration; appreciation of Asian American experience	<i>Incorporation:</i> Blending of Asian American identity with the rest of individual's identities	

## **Dimensions of Racial/Ethnic Identity**

In addition to using identity development theories and models, researchers attempting to study racial/ethnic identity have also focused on the key dimensions thought to be relevant to the specific group of interest. Components have been developed for measuring the racial/ethnic identity of many different groups, including, but not limited to, African Americans (Parham & Helms, 1981), Mexican Americans (Garcia, 1982), Jewish Americans (Zak, 1973), Greek Americans (Constantinou & Harvey, 1985), and Chinese Americans (Ting-Toomey, 1981). Some racial/ethnic identity components that have been included in these studies are described below, including self-categorization, evaluation, values and beliefs, importance, sense of independence, social embeddedness, behavioral involvement, self-attributed characteristics, ideology, and narrative.

### *Self-categorization*

Self-categorization is the identification of self as a member of, or categorization of self in terms of, a particular social grouping. All other dimensions of identity are contingent upon self-categorization (Phinney, 1995). Researchers assessing self-categorization (e.g., Phinney, 1992; Shelton & Sellers, 2000) use a variety of approaches to ensure that collective identities of participants are measured appropriately. Phinney (1992) employs open-ended questions to ask participants about their collective identification. However, such measures can only reveal whether a person has placed the self inside a social category; they are limited in determining how certain the person is of the categorization and whether they view themselves as a marginal or prototypical group member.



### *Evaluation*

Evaluation refers to the positive or negative attitude that a person has toward the social category in question. Several research literatures (e.g., Sellers, Rowley, Chavous, Shelton & Smith, 1997) distinguish between two forms of evaluation: (a) favorability judgments made by people about their own identities; and (b) favorability judgments that one perceives others, such as the general public, to hold about one's social category. The terms *private regard* and *public regard* have been coined by Sellers and his colleagues (Sellers, Smith, Shelton, Rowley, & Chavous, 1998) to distinguish the two forms of evaluation. *Private regard*, as defined by Sellers et al. (1998), refers to the evaluation of one's social category as judged by the self (e.g., How positively or negatively do I view my identity). *Public regard* refers to the perceived evaluation of others (e.g., How positively or negatively I think people in general view my group). The separation of private and public regard is justified by the fact that these two components are not always correlated.

### *Values and Beliefs*

Values and beliefs have been included in the many measures developed for specific groups. The assessment of values and beliefs usually requires the use of different content for various groups. For example, Latinos may place an emphasis on familism while African Americans place emphasis on Afrocentric values and Asians place an emphasis on filial piety (Phinney & Ong, 2007). Values are important indicators of an individual's closeness to the group and tend to be strongly correlated with commitment and sense of belonging.

### *Importance*

Importance captures the degree of importance of a particular group membership to the individual's overall self-concept. There are two forms of importance: (a) *Explicit importance* is the individual's subjective appraisal of the degree to which a collective identity is important to an individual's sense of self; and (b) *implicit importance* is the placement, from low to high, of a particular group membership in the person's hierarchically organized self system.

Sellers et al. (1997) use the term "centrality" to create a subscale reflecting explicit importance. Other researchers have conceptualized implicit importance as salience (Stryker, 1980; Stryker & Serpe, 1982, 1994) and cognitive centrality (Gurin & Townsend, 1986). Stryker and Serpe (1982) operationalize salience by asking respondents to imagine meeting someone for the first time and to indicate which piece of information about self would be told first, second and so on (p. 210). Herring, Jankowski, and Brown (1999) use data from the 1984 National Black Election Study (NBES) to assess racial salience. The salience item was included in both the preelection and postelection surveys: "People differ in whether they think about being black—what they have in common with blacks. What about you—do you think about this a lot, fairly often, occasionally, hardly ever or never?" The measure assumes that the more salient one's racial identity, the more frequently he or she should think about it.

### *Sense of Interdependence*

Interdependency beliefs as a dimension of social identity are rooted in Sherif's (1966) definition of group and theory of intergroup relation. By Sherif's definition, norms and values regulate the behavior of group members as they pursue common goals

and reach to in-group and out-group members. Sherif also postulated that an encounter between two individuals could be more or less interpersonal or intergroup in nature depending on the extent to which they interact “in terms of their reference group identification” (Sherif & Sherif, 1979, p. 9). Reference group identification was defined in terms of perceived interdependency or common fate, that is, that self-identity and self-interests are based on group membership.

According to Baumeister and Leary (1995), human beings’ basic and fundamental need to belong leads them to form positive, lasting and stable relationships. Given their theory, we become members of groups and conform to group norms at least in part to satisfy this need to belong. Group membership is also desirable because of individuals’ belief that their fates and outcomes are similar to that of other group members despite individual differences (Gurin & Townsend, 1986). Gurin and Townsend (1986) specify a “sense of common fate” as one of three properties of gender identity (the other two being perceived similarity to other group members and centrality of gender to the sense of self). Phinney (1992) uses the measure “I have a strong sense of belonging to my own ethnic group” to assess ethnic identity.

### *Social Embeddedness*

Social embeddedness captures the degree to which a person’s everyday ongoing social relationships reflect a particular collective identity. The level of social embeddedness is directly related to the perceived cost and pain of abandoning a particular collective identity because a majority of one’s social contacts and relationships reinforce this identity. According to Stryker (1980) who labels this hypothesized identity element

as commitment, this variable is defined by the secret and personal cost entailed in no longer fulfilling a role based on a given identity.

### *Behavioral Involvement*

Behavioral involvement is defined as the degree to which a person engages in actions or activities that directly implicate the collective identity in question. Phinney's (1992) MEIM Ethnic Behaviors subscale measures behavioral involvement and includes items such as "I participate in the cultural practices of my own group, such as special food, music or customs." Racial and ethnic involvement is most often assessed by examining language, friendship, social associations, religion, area of residence, cultural customs and political affiliation (Phinney, 1990). Knowledge and use of an ethnic language, in particular, has been viewed by some researchers as an integral aspect of ethnic identity.

When investigating racial and ethnic involvement, it is necessary to recognize and differentiate the unique practices that are inherent to specific racial groups. Since it is typically inaccurate to assume that one racial/ethnic group's involvement activities apply to all people of color, it is important to maintain the distinctions between various groups. Yet, this is a common oversight of research on racial/ethnic identity.

### *Self-attributed characteristics*

Self-attributed characteristics include traits and characteristics that are associated with a social category and endorsed as self-descriptive by a member of that category. The most heavily researched area of traits as identity content is that of gender identity, including various measures of masculinity, femininity and androgyny. The hierarchical classification method developed by DeBoeck and Rosenberg (1988) is used to assess

traits associated with collective identities, such as gender, age, ethnicity, and political identities. Using this ideographic methodology, participants are asked to generate a set of traits and/or behaviors that they associate with a particular identity category they have previously named as self-descriptive. The attributes shared between different identity labels become the basis for development of an identity hierarchy.

### *Ideology*

Individuals' beliefs about experience and history of the group over time constitute ideology. The term *group consciousness* has been used by Gurin and Townsend (1986) to describe this set of beliefs: “[Group] consciousness refers to the member’s ideology about the group’s position in society” (p. 139). According to Gurin and Townsend, as well as others, group consciousness is multidimensional, including components of collective discontent over a group’s relative power, resources, or prestige; appraised legitimacy of the stratification system; and a belief in collective action.

### *Narrative*

Narrative is an individual-level collective identity element that represents the internal story that the person has developed regarding self and the salient social category. Narrative research consists of two types of stories: *collective identity story* (or, story as a member of my group) and *group story* (or, story of my group). Although narrative has not been the focus of much psychological work on collective identity, it has become a major approach to understanding personal identity. In addition, narrative has become a substantial and growing approach to self/identity in sociology, political science, anthropology, cultural studies, and the analyses of stigmatized minorities.

As articulated by Phinney (2007), these dimensions support the examination of parallels between the constructs of ethnic and racial identity. Both identity constructs involve a sense of belonging to a group and a process of learning about one's group. Both racial and ethnic identities are associated with: cultural behaviors and values, attitudes toward one's own group, and responses to discrimination. Both of these identities also vary in importance and salience across time and context. While various studies have focused on different components of ethnic and racial identity, this particular study emphasizes three dimensions believed relevant to multiple racial/ethnic groups, including sense of common fate, race centrality and shared racial/ethnic values. Having examined the theories, models, and dimensions of racial/ethnic identity development, I now turn attention to the review of studies related to the empirical investigation of racial/ethnic identity development and (1) multiple student groups; (2) college environment; and (3) interaction with diverse peers.

### **Racial/Ethnic Identity Development and Multiple Student Groups**

Much of the research on racial/ethnic identity development has focused on a single racial/ethnic group. Phinney and colleagues have sought to address the dearth of studies involving multiple racial/ethnic groups by conducting research involving various groups, including Asian-Americans, Blacks, Latinos, and Whites. A review of research involving multiple racial/ethnic groups is offered in this section.

In an effort to study racial/ethnic identity development for multiple groups, Phinney (1989) conducted in-depth interviews with 91 Asian-American, Black, Hispanic, and White tenth-grade students, all American born, from integrated urban high schools. Although the White subjects could not be reliably coded, the minority subjects were

coded as being in one of three identity stages. About one-half of the minority subjects had not explored their ethnicity (diffusion/foreclose); about one-quarter were involved in exploration (moratorium); and about one-quarter had explored and were committed to an ethnic identity (ethnic identity achieved). While Phinney (1989) found similarities in the process of identity development for the three minority groups, the particular issues faced by each group were different.

Phinney and Alipuria (1990), examined the ethnic identity of three minority groups (i.e., Black, Mexican-Americans, and Asian Americans) and a comparison White group, using a sample of 196 college students. Their results suggested that ethnic identity is a component of identity development. In this study, Black and Mexican-Americans showed greater ethnic identity search than their White counterparts while Asian Americans had the lowest ethnic identity among the three minority groups.

In a study utilizing both 417 high school students and 136 college students, Phinney (1992) reported significant differences between ethnic minority groups. The study revealed that African American college students scored the highest in ethnic identity, followed by Latino Americans, Asian Americans, and then White Americans. In a similar study, White students were found to have the lowest ethnic identity while African Americans had the highest ethnic identity followed by Latino Americans, and Asian Americans (Phinney, DuPont, Espinosa, Revill, & Sanders, 1994).

Chae (2000) conducted a study to assess the influence of gender and ethnic group membership upon ego and ethnic identity formation. This study included 150 male and female college students from four ethnic groups, including African American, Asian American, Hispanic American and White American. The results of his study revealed

significance difference in the way ethnic group members identified with their ethnic and cultural heritage. Similar to Phinney (1992, 1994), Chae (2000) found that White and Asian American students scored the lowest on ethnic identity while Hispanic Americans and African Americans scored the highest.

### **Racial/Ethnic Identity Development and College Environment**

The greatest gains in identity formation appear to occur during the college years. During this time, adolescents may experience an identity crisis which causes them to struggle to understand themselves and decide their future. The diversity of experiences found in college environments serve both to trigger consideration of identity issues and to suggest alternative resolutions for identity concerns (Waterman, 1982).

As noted by Erikson (1956), the search for identity marks an important step in adolescence. For young people, attending college represents a psycho-social moratorium—a time and a place in which they can experiment with different social roles before making permanent commitments to an occupation, to intimate relationships, to social groups and communities, and to a philosophy of life (Erickson, 1956). In her expert report to the Supreme Court, Patricia Gurin (Gratz, et al. v. Bollinger, 2003 & Grutter, et al. v. Bollinger, et al., 2003) concurs with Erikson by stating:

Our institutions of higher education are constituted precisely to take advantage of this developmental stage and to provide that ideal moratorium. Residential colleges and universities separate the late adolescent from his/her past. They allow young people to experiment with new ideas, new relationships, and new roles. They make peer influence a normative source of development. They sanction a time of exploration and possibility (at least four years and, for many, graduate years as well) before young people make permanent adult commitments.

Diverse college environments provide a rich context for students in need of “discontinuity” (Erikson, 1956) from their past environments. Various co-curricular and



curricular experiences are thought to contribute to the identity development of college students, including multicultural education, intergroup dialogue, service-learning, cultural organizations, and living on-campus. Research highlighting the relationship between identity development and curricular and co-curricular college experiences is reviewed below.

### ***Co-Curricular Experiences***

*Co-curricular Diversity Activities.* Research indicates that students who are involved in co-curricular activities stay in college and develop valuable skills including critical thinking, interpersonal communication, and leadership (Boyer, 1987; Inman & Pascarella, 1998; Pascarella & Terenzini, 2005). According to Astin (1993), almost any type of student involvement in college positively affects student learning and development. Extracurricular activities serve an important role on college campuses including complementing the university's academic curriculum and augmenting the student's education experience.

Participation in extracurricular activities provides students with a setting to become involved and to interact with other students, thus leading to increased learning and enhanced development. Activities which provide a setting for student interaction, relationship formation, and discussion help students mature socially. In addition, collaborating outside of the classroom with diverse others allows for students to gain more self-confidence, autonomy, and appreciation for others' differences and similarities.

In studies of the impact of college on White students racial attitudes and views, Milem (1992, 1994) found that an increased level of racial and cultural awareness, greater commitment to the goal of promoting racial understanding and more liberal racial

attitudes were associated with various student behaviors including: participation in more frequent discussions of social and political issues, frequent talks about racial/ethnic issues, socializing with someone from another racial/ethnic group, attending a racial awareness workshop, and/or enrolling in ethnic studies courses. Other studies (e.g., Pascarella, Whitt, Nora, Edison, Hagedorn, & Terenzini, 1996) have reported that racial and cultural awareness workshops positively influenced students' openness to cultural, racial and value diversity. Moreover, White students who attended racial and cultural awareness workshops were closely aligned with students of color in how they perceived the racial climate on their campus. Finally, Pascarella et al. (1996) reported that students at the end of their first year of college had measurable gains in critical thinking as a result of their participation in racial and cultural awareness workshops.

Most of the studies focused on co-curricular activities have investigated the racial/ethnic identity development of African American students. Taylor and Howard-Hamilton's (1995) study examined the relationship between racial identity attitudes among African American male students and student engagement. The study involved 117 participants from 10 predominantly white institutions. Findings suggest that higher levels of out-of-class engagement contribute to stronger racial identity attitudes. Specifically, highly involved students tended to be at the Immersion-Emersion and Internalization stages of Cross's (1995) model, whereas less-engaged participants reported higher levels of Pre-Encounter attitudes.

In a study of 7,923 African American students from 192 postsecondary institutions, Flowers (2004) found that in-class and out-of-class experiences positively impacted student development for all of the students included in the study. In addition,

the study showed that the magnitude of the positive effects of student involvement on academic and social development was more pronounced for some student involvement experiences (e.g., library experiences, course learning experiences, personal experiences) than it was for other student involvement experiences (e.g., experiences in the student union, experiences with athletic and recreation facilities, participation in clubs and organizations).

*Cultural Organizations.* Cultural clubs and organizations include, but are not limited to: fraternities and sororities open solely to membership among one racial/ethnic group, cultural groups that celebrate one specific racial or ethnic heritage, and activist organizations that concentrate on political interests for a certain race or ethnicity (Inkelas, 2004). Critics of these clubs argue that they create an enclave within the college campus, in which ethnic minorities congregate and never make any effort to interact with other diverse peers (D'Souza, 1991). Proponents of these clubs assert that racial/ethnic minority students need a safe space for the purpose of social comfort, identity development, and/or community advocacy (Hurtado, Milem, Clayton-Pedersen, & Allen, 1999; Trevino, 1992).

According to Espiritu (1992), participation in racially and ethnically focused student clubs and organizations awakens a sense of communal affiliation and serves as an external force that compels individuals to form certain identities. The importance of such clubs and organizations in the psychosocial growth of minority students was advanced by Tatum (1999), who recognized that connections with similar others are a significant step in the process of identity development.

Saylor and Aries (1999) traced the strength of ethnic identity among 110 minority college students from the beginning to the end of their first year. Results of the study indicated that strength of ethnic identity at the time of college entry was predicted by family participation in cultural traditions and high school involvement with ethnic organizations and friends. By year's end, students' background experiences as predictors of ethnic identity were replaced by affiliation with ethnic people and activities on campus. The findings of this study support the argument that ethnic organizations benefit minority students by allowing them to adjust to the campus environment without surrendering their ethnic identities.

*Living On-campus.* According to Chickering and Reisser (1993), interacting with others enables the development of a sense of respect and interdependence and should be considered an essential component in identity formation. They posit that living on campus increases the likelihood of interactions with diverse others, which in turn may lead to developing a sense of self through mature interpersonal relationships. Furthermore, student development is enhanced by the environmental influences (e.g., friendships, sense of community, etc.) gained from living in on-campus housing such as residence halls.

The residence hall community is a key environment for students seeking to become involved in campus-related and off-campus activities during their undergraduate years. These activities may serve to influence the personal development of individuals who are still in the process of forming their identity. By participating in residence hall activities to support and build their community, students are engaging in learning experiences that impact their education and personal development (Astin, 1999). Thus,

living in residence halls with well-integrated academic and nonacademic aspects may have a positive influence on the student (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). The benefits of living in residence halls may not accrue from the place itself, but from the activities and opportunities for students to socialize with others in a shared living space (Terenzini et al., 1996).

### ***Curricular Experiences***

*Diversity Courses.* In an attempt to meet the challenge of preparing students to be effective citizens in a diverse society, diversity courses encourage interaction with diverse peers and promote democratic engagement. Although diversity courses vary in many aspects, most seek to accomplish the following: (1) expose students to multiple perspectives on issues; (2) teach students to think more complexly; and (3) actively engage students in social issues such as oppression (Adams & Zhou-McGovern, 1994; Banks & Banks, 1995; Tatum, 1992).

Diversity courses have been linked with different learning, civic, and multicultural outcomes. Enrollment in these courses has a positive impact on civic outcomes, including promoting racial/ethnic understanding (Astin, 1993; Gurin, 1999; Milem, 1994), interpersonal skills (Hurtado, 2001), and participating in a community action program (Gurin, 1999). Researchers (Astin, 1993; Villalpando, 1994) have also found that ethnic studies courses, cultural awareness workshops, cross-racial socialization, and discussing racial/ethnic issues were associated with widespread beneficial effects on a student's academic and personal development, regardless of the student's race. Furthermore, students who enrolled in an ethnic or women's studies course were shown to experience positive gains in learning outcomes such as complex

and socio-historical thinking (Gurin, 1999), developing critical perspectives (Musil, 1992), foreign language skills (Astin, 1993) and critical thinking (Gurin, 1999, Hurtado, 2001; Tsui, 1999). While studies have examined the relationship between enrolling in a diversity course and outcomes related to racial/ethnic identity development such as cultural awareness (Gurin, 1999), tolerance (Hurtado, 2001) and awareness of inequality (Lopez, 1993), there is still a lack of studies that directly assess the impact of diversity courses on racial/ethnic identity development.

*Intensive dialogue.* Intergroup dialogue, a commonly used form of intensive dialogue, brings together members of two or more social identity groups that have a history of conflict or potential conflict. Such dialogues are normally facilitated, face-to-face meetings that occur over a period of weeks or months. The goals of intergroup dialogues include having participants: explore the role and experience of social identity group memberships; examine ways in which power, privilege, and oppression structure these experiences; develop constructive skills for engaging across differences; and identify ways to challenge group inequalities and promote social justice (Zuniga, Nagda, & Sevig, 2002).

Research indicates that engagement across differences (e.g., intensive dialogue) enables students to challenge misconceptions and stereotypes (Zuniga & Sevig, 1997), develop increased personal and social awareness of social group membership (Nagda, Spearmon, & Holley, 1999), develop more complex ways of thinking (Gurin, Peng, Lopez, & Nagda, 1999; Lopez, Gurin, & Nagda, 1998), build skills for communication and working with disagreements, and identify ways of taking actions for social justice (Zuniga et al., 1997).

Despite the positive relationship between dialogue and various student outcomes, few studies (Burbules & Rice, 1991; Nagda & Zuniga, 2003) have examined the impact of dialogue on identity. In a study of the impact of intergroup dialogues on students of color and White students, Nagda and Zuniga (2003) found that such dialogues raise awareness of racial/ethnic identity. Students who participated in intergroup dialogues more strongly considered race as an important social identity in how they thought about themselves and thought more frequently about being a member of their racial/ethnic group.

Burbules and Rice (1991) described how the specific practice of dialoguing with others can help teachers and their students to expand their own sense of identity. They wrote that “one’s identity will be more flexible, autonomous, and stable to the degree that one recognizes one’s self as a member of various different subcommunities simultaneously” (p. 404). When individuals begin to reconsider their own beliefs as informed by the perspective of another culture, they come to see the value of developing a more complex and multifaceted framework of understanding by incorporating that perspective into their own. Their sense of identity and their understanding of their own perspective deepens.

*Service-learning.* *Service-learning* is used to describe curriculum which links community service to course work. Students who enroll in service-learning courses are able to gain academic credit by participating in community-based service activities. Students further their understanding of the course material by reflecting on their community service (Bringle & Hatcher, 1995). The three key principles underlying service learning are: (1) student’s service activities in the community are integrated into

the course work through assignments, exercises, discussion, and writing; (2) the needs and attempted remedies are defined by a participation among university and community actors in order to benefit those in the community with fewer life chances; and (3) students undertake a process of observation, action, analysis, and reflection that demonstrates their educational development (Honnet & Poulsen, 1989; Marullo, Lance, & Schwartz, 1999).

According to Marullo (1998), exposure to different types of people through service-learning helps the identity formation of college students who are experiencing the challenge of discovering and defining their own identity. It also teaches these students respect for others. When done properly, service learning is thought to: provide students with an increased awareness of civic responsibility; promote students' moral development; and help students analyze and explain the causes and consequences of the social problems with which they are involved (Honnet & Poulsen, 1989; Levinson, 1990).

The connection between the identity development process and the motivation to participate in community service has been highlighted in studies by Rhoads (1997) and Youniss and Yates (1997). In both studies, the development of a sense of self and social responsibility was linked to community service. Students developed greater knowledge of self through meaningful work with others during involvement in community service, which resulted in the development of both a personal and collective identity (Rhoads, 1997; Youniss & Yates, 1997). According to Jones and Hill (2001), long-term involvement in community service provides a unique opportunity to reflect on one's identity and what is important in one's life.



## **Racial/Ethnic Identity Development and Interaction with Diverse Peers**

Research shows that a diverse student body provides students with multiple opportunities for interracial and cross-cultural interactions that contribute to the development of a wide array of positive educational outcomes. Specifically, interracial interactions enhance students' social lives and lead to student development in cultural awareness (Antonio, 2001; Astin, 1993), close interracial friendships (Antonio, 2001), commitment to racial understanding, and open discussions of racial issues (Astin, 1993; Chang, 1999). Also, interracial interactions contribute to students' improvement in communication and leadership abilities (Antonio, 2001; Toutkoushian & Smart, 2001). Finally, interracial interactions produce higher levels of academic development and greater satisfaction with college (Astin, 1993; Bowen & Bok, 1998; Gurin, 1999; Hurtado, 1999).

Astin (1993) used a longitudinal database consisting of a national sample of students to study the correlates to socializing with someone of a different race in college. Astin found that independent of students' entering characteristics and different types of college environments, frequent interracial interaction in college was associated with increases in cultural awareness, commitment to racial/ethnic understanding, commitment to cleaning up the environment, and higher levels of academic development (critical thinking skills, analytical skills, general and specific knowledge, and writing skills) and satisfaction with college.

Chang's (1996) multi-institutional study of interracial interaction indicated that, in general, greater racial/ethnic diversity in the student population leads to greater frequency of socialization across race. In addition, he found that socialization across race was

associated with discussing racial/ethnic issues in college, taking ethnic studies courses, attending racial/cultural awareness workshops, promoting racial/ethnic understanding, and believing in the power of individuals to change society. These associated behaviors and attitudes, Chang (1996) found, directly enhance student retention, college satisfaction, intellectual self-concept, and social self-concept.

Despite the increase in studies related to interracial interaction, only a handful of studies (Broman, Neighbors, & Jackson, 1988; Demo & Hughes, 1990; McKinney, 2006) have specifically addressed the impact of interracial interaction on racial/ethnic identity development. Broman et al. (1998) used data from the National Survey of Black Americans to explore the relationship between sociodemographic factors and racial group identification. Their hypothesis that increased contact with the outgroup weakens identification was supported by their finding that childhood interracial contact decreases feelings of closeness to other Blacks.

Using data from the same national sample, Demo and Hughes (1990) examined the social structural processes and arrangements related to racial group identification. They found that childhood interracial contact decreases both feelings of closeness to other Blacks and separatist ideas; however, adult interracial contact increases racial group evaluation and has no relationships to feelings of closeness. These conflicting findings led Demo and Hughes (1990) to suggest that the impact of interracial contact depends on its timing in the life course.

McKinney (2006) used autobiographical writings by young whites to explore how interracial contact changed whites' attitudes of people of color and perceptions of what it means to be white. She found that experiences of interracial contact led the respondents

to either a new understanding of themselves as whites or of the life circumstances of those in other groups. As a result of interracial contact, respondents began to better understand racial inequality, white privilege, and how whiteness distinguishes one's perspective from others' (McKinney, 2006).

### *Allport's Contact Hypothesis*

To better understand the relationship between diverse peer interactions and racial/ethnic identity, it is important to examine the nature of the student interactions or peer contact. Therefore, the *contact hypothesis* proposed by Allport is included in this literature review. Contact theory was first introduced by Allport's (1954) in *The Nature of Prejudice*. According to Allport, ignorance about an out-group is the result of limited contact between in-groups and out-groups, which can ultimately lead to racial conflicts. Allport hypothesized that eliminating the prejudices and stereotypes underlying racial conflict requires substantive contact among members of different racial groups. As such, the basic premise of Contact Theory is that, depending on its nature, contact can reduce stereotypes and prejudices and subsequently increase racial tolerance (Allport, 1954).

Allport (1954) suggested that there are primarily two types of contact that can occur between individuals. The first type of contact is casual or superficial contact, which is contact that is practically unavoidable whenever two or more groups live intermingled in a common territory. For example, on college campuses, students of different racial groups are often in close proximity due to shared classes and living environments; however, these students know very little about each other. The second type of contact that can occur between individuals is "true acquaintance". This type of

contact, according to Allport (1954), brings about knowledge and acquaintance with out-groups and encourages more positive beliefs concerning minority groups.

In order to achieve “true acquaintance” and reduce racial prejudice, several conditions must be met in intergroup situations. The five conditions include the following: (1) cooperative interdependence among individuals across groups; (2) equal status among participants within the contact situation; (3) pursuit toward common goals by the group members; (4) opportunities for personal acquaintances between members; and (5) contact sanctioned by authority or institutional supports, such as laws or customs.

### **Summary**

As evidenced by the literature, racial/ethnic identity has been studied utilizing a variety of models and dimensions. This particular study will focus on three dimensions of racial/ethnic identity including sense of common fate, race centrality, and racial values. These dimensions were chosen because: 1) they are measured in such a way that allows for comparisons between different racial/ethnic groups; and 2) they are consistent with the survey items used in this study. According to Tajfel (1981), racial/ethnic identity is best viewed as a multidimensional construct because it is “that part of an individual’s self concept which derives from his knowledge of his membership of a social group (groups) together with the value and emotional significance attached to that membership” (p. 255). The use of these three dimensions (i.e., sense of common fate, race centrality, and racial values) serves as a starting point for investigating the relationship between racial/ethnic identity and diversity related college experiences.

The studies presented in this literature review are representative of the research that has been conducted in the area of racial/identity development as it relates to multiple

racial/ethnic groups, the college environment, and interaction with diverse peers. As evidenced by this literature review, the empirical studies of racial/ethnic identity are far outweighed by the formidable body of literature on racial/ethnic identity development theories, models, and dimensions. The dearth of empirical studies related to the racial/ethnic identity development of diverse student groups provides a compelling reason for continued investigation of this topic. The reason why the aforementioned studies are inadequate is fourfold. First, the sample size and participant groups are lacking in diversity. While some studies involved multiple student groups, the sample sizes were relatively small in regards to the number of participants attending college. Also, many of the studies involving interaction with diverse peers focused solely on White students' interactions with Blacks. Second, the studies do not examine racial/ethnic identity using multiple dimensions; rather they tend to focus on a single overarching measure of racial/ethnic identity. Other studies have focused on measures of racial/ethnic identity that were group specific, which limits the ability of researchers to make meaningful comparisons across groups. Third, the studies do not attempt to measure the impact of student context or diversity-related experiences on identity development. Few studies have examined the factors that influence adolescents' ethnic identity development. Rather, researchers have studied individuals at different stages of ethnic identity and then, related their level of ethnic identity to other measures, such as self-esteem. Of the limited studies examining college context and experiences, none attempts to simultaneously examine diversity-related co-curricular and curricular experiences. Lastly, none of the studies measures racial/ethnic identity as a continuous variable and therefore fail to adequately capture the dynamic nature of racial/ethnic identity. Most of the studies do

not take a process approach to understanding racial/ethnic identity although it is a construct that has been found to change with time and context.

Based on my review of the literature, my investigation of racial/ethnic identity seeks to further existing research by: (1) examining elements of identity that may be common across multiple racial/ethnic groups (i.e., sense of common fate, race centrality, and shared racial/ethnic values); and (2) investigating the relationship between various contextual factors (i.e., institutional characteristics and climate; interactions with diverse peers; and diversity-related college experiences) and racial/ethnic identity development. Chapter 3 discusses the methodology of the study including the conceptual framework, research design, measures utilized in the study, data collection and sample, survey data preparation, and limitations.

## **CHAPTER 3**

### **METHODOLOGY**

#### **Research Questions and Hypotheses**

This chapter describes the research design and methodology used to answer the research questions posed in this study. As previously stated, the three research questions that guided this study were:

- a) How do diversity-related college experiences affect the racial/ethnic identity development of White, Asian Pacific American, Latino and African American students?
- b) What is the relationship between racial/ethnic identity development and frequency and type of interactions with diverse peers?
- c) Does a significant difference exist in the racial/ethnic identity development of White, Asian Pacific American, Latino, and African American students?

These questions further the existing literature by examining and comparing the effects of diversity-related college experiences on the racial/ethnic identity development of White, Asian Pacific American, Latino and African American students. Several conceptual hypotheses can be drawn from the research questions, as well as the previous review of the literature and findings related racial/ethnic identity development. Specifically, I propose:

**Hypothesis 1:** Diversity-related college activities will positively contribute to the racial/ethnic identity development of White, Asian Pacific American, Latino and African American students. Both co-curricular and curricular experiences that center on diversity will have direct positive effects on students' racial/ethnic identity development. This hypothesis is consistent with prior research (Astin, 1993; Chickering and Reisser, 1993; Hurtado et al., 1999; Trevino, 1992).

**Hypothesis 2:** Positive and sustained interactions with diverse peers will cause a positive change in students' racial identity development. This hypothesis is supported by previous research demonstrating the effects of interactions with diverse peers on student development (Astin, 1993; Demo & Hughes, 1990; McKinney, 2006).

**Hypothesis 3:** Students identifying as African American and Latino will demonstrate a higher level of racial/ethnic identity development than those identifying as White and Asian Pacific American, as suggested by previous studies (Chae, 2000; Phinney, 1990, 1992).

### **Data Collection and Sample**

The data for this study came from two surveys that serve as a primary component of the *Preparing College Students for a Diverse Democracy Project* conducted by Sylvia Hurtado and assistants at the University of Michigan. First-year students from nine public universities were surveyed during freshman orientation or shortly after their matriculation as freshmen in the Fall of 2000. These universities which covered different geographical regions of the United States included Arizona State University, University



of California-Los Angeles, University of Maryland, University of Massachusetts-Amherst, University of Michigan, University of Minnesota, University of New Mexico, University of Vermont and University of Washington.. Respondents who completed the first-year survey were surveyed again during their sophomore year (i.e., Winter/Spring 2002). In both surveys, students were asked about their attitudes, values, and behaviors concerning a number of diversity-related issues, such as racial discrimination, societal problems, and interactions with diverse peers.

The first-year survey focused on the pre-college behaviors and attitudes of first-year students. The purpose of the second-year survey was to understand how students' exposure to diversity and civic engagement during college influences their development along cognitive, social-cognitive, and democratic outcomes. In regards to diversity, the survey measured students' involvement in different diversity-related courses and co-curricular activities as well as the quantity and quality of their interactions with diverse peers.

In addition to providing data on students' commitments and racial/ethnic identity during college, the second-year survey provides important follow-up information on a number of different outcomes. By comparing students' data from the first-year survey across these outcomes, the second-year survey offers a means to assess students' change during the first two years of college.

#### *First-Year Survey Administration*

All first-year freshmen at the nine participating campuses in Fall 2000 were eligible for participation. Ideally, all entering students would complete and return the first-year survey. In consultation with each campus, a survey distribution method that

was most appropriate for their respective campus was developed. As a result, three general strategies were employed: (1) distribution during a summer orientation session, (2) mailing the surveys to first-year students at the beginning of their fall semester/quarter, and (3) distribution within designated classes, early in the fall semester/quarter.

Three institutions administered the survey during summer orientation sessions. Each of these institutions scheduled time for the students to complete and return the survey during the orientation session. This method produced the highest response rates, which ranged between 67% and 81%.

Four campuses mailed the survey to their first-year students and then did a second-wave mailing later in the term to students who had not returned the initial survey. The response rate for this method varied widely ranging between 14% and 42%. One of the campuses also made follow-up phone calls after their second-wave mailing to racial/ethnic populations with the lowest response rate.

The remaining two schools distributed the first-year surveys to entering students in freshman seminar and English composition classes, which had high enrollments of first-year students and produced response rates of 12% and 19%.

Response rates ranged from 12% to 81% for the first-year survey with a total of 12,561 respondents from the nine institutions. Due to the low response rates at some of the campuses, weights were developed to minimize non-response bias. This weighting procedure is described in detail in a subsequent section.

### *Second-Year Survey Administration*

Budget constraints limited the distribution of the second-year survey, meaning only first-year survey respondents at the nine institutions were sent a second-year survey. In addition, an oversampling of ethnic minority students at six of the institutions were sent a second-year survey, because past research has shown that response rates from ethnic minority students are lower than White students (Dey, 1997; Hurtado, Carter, & Kardia, 1998). Ideally, all students who were sent a second-year survey would complete and return it.

Each of the campuses mailed a letter from its president or provost to let students know that they would be receiving a second-year survey from the Diverse Democracy Project with a gift card from Borders Bookstores. This letter was sent for two purposes: (1) it gave forewarning to students, because of the anthrax cases and terrorist tragedies of 9/11, that they would be receiving a large envelope from an off-campus address with a gift card enclosed, and (2) returned letters would help the institution identify incorrect mailing addresses, so that addresses could be sought. Each campus provided students' names and addresses to the survey company. During the Spring 2002 term, a paper survey was sent to each student, followed by a reminder postcard two weeks later, and a second paper survey two weeks after the reminder postcard. In addition, a web survey was available for student who wanted to complete the survey online. Based on response rates from the spring mailing and availability of students' email addresses, email messages were sent to students at seven campuses during the summer with the link for the web survey.

The methods used for the follow-up survey resulted in a response rate that ranged from 27.1% to 45.2% with a total of 5,541 respondents from the nine institutions. The longitudinal sample (i.e., students who responded to both the first-year and second-year surveys) for this study is 4,403 cases. The breakdown for each racial/ethnic group is as follows: White (n=3,051), Asian Pacific American (n=701), Latino (n=378) and African American (n=223).

### **Survey Data Preparation**

After the data were scanned, the research team worked with individual campus representatives to clean the data. Previous research reveals that students' response to surveys varies substantially by ability, race, and gender (Dey, 1997; Hurtado et al., 1998). To establish important controls and create weights to minimize non-response bias in data analysis, information related to students' ability, race, and gender was obtained on the entire entering first-year class from each institution.

#### *Adjusting the Data for Non-Response*

Weights were created using the characteristics of each institution's first-year student population to correct for possible sources of response bias and to approximate the total first-year population for each campus. Electronic data was requested from each institution on their population of first-year students in order to develop the weights for their campus. The same weighting technique was used for all of the institutions.

The weighting procedure required three steps that included a logistic regression analysis to obtain predicated probabilities of responding in Year 1 and Year 2, a post-stratification weighting method, a weight variable adjustment. Researchers use this weighting technique to adjust the sample so that it reflects its population (Babbie, 2001;

Kish, 1965). The general formula to develop the weight variable is: Total weight=1/probability of selection\*1/predicted probability of response\*post-stratification weight (TWEIGHT=1/PROBSEL\*INVPROB\*POSTSTRT).

For this longitudinal study, the probability of selection was 1 (PROBSEL=1) for all students. That is, each student had an equal chance of responding to the first-year survey because we surveyed the institutions' entire first-year class. In order to determine the probability of responding to a longitudinal survey, it was necessary determine the predicted probability for both time points. First, a logistic regression model was created to determine the predicted probability of Year 1 response for each student (Astin & Molm, 1972). Research suggests that using demographic characteristics (e.g., gender, race) is a common procedure to compare respondents versus non-respondents (Dey, 1997). Thus, for the logistic regression the probability of responding to the first-year survey was based on three demographic variables: student's gender, race/ethnicity, and SAT composite scores (or converted ACT using the conversion chart by the College Board, see Appendix C). This regression created the inverse of the predicted probability of response (INVRESP1) for each student for Year 1. A second variable was created using an additional logistic regression for Year 2 data. Using the same predictor variables from Year 1, this logistic regression model produced the inverse of the predicted probability of response for Year 2 (INVRESP2) based on the total population.

Next, a post-stratification weight (POSTSTRT) based on the product of both years of predicted probabilities was created. The post-stratification weight represents an adjustment for specific racial/ethnic groups in order to make the weighted sample appear more like the population in terms of race. Thus the final total weight (FNLWGHT)

included the predicted probability of response for Year 1 and Year 2 and the post-stratification adjustment.

Once this final total weight (FNLWGHT) was created, students responding in both years were assigned a weight variable based on their gender, race, and SAT score. This weight (FNLWGHT) ensures that the responses of low responding racial/ethnic groups are weighted to reflect the population. The population weight variable (FNLWGHT) used for this study was a longitudinal weight that accounts for the probability of students responding to the first-and second-year surveys.

In order to ensure that the weighted sample does not produce incorrect standard errors and inflated t-statistics due to a large weighted sample size, an adjusted weight variable (ADJWGHT) was created. The adjusted weight variable is the final total weight variable divided by the mean of the final total weight variable for all groups ( $ADJWGHT = FNLWGHT / MEAN\ FNLWGHT$ ). This adjustment ensures that the weighted sample will closely match the original sample size, yet still yields a sample that proportionally corrects for non-response across the sample.

Due to the wide variation in response rates among the nine institutions in this study, longitudinal institutional weights also were created using the weighting method described above. Thus, the sample has two different weights that were applied in different sets of regression analyses. The first weight adjusts for non-responses for the overall population. The second weight adjusts for non-response within each institution. That is, the weight created for Campus X is based on the campus rate at Campus X and is applied to only students from Campus X.

### *Missing Data Analyses*

Missing data analyses were conducted across all variables used in the model. In order to maintain statistical power, missing values for all continuous independent variables were replaced using the EM algorithm within each racial/ethnic group. The EM algorithm represents a general method for obtaining maximum likelihood (ML) estimates when data were missing (Dempster, Laird, & Rubin, 1977; McLachlan & Krishnan, 1997). The EM algorithm consists of two steps, an expectation step and maximization step, which are repeated multiple times in an iterative process that eventually converges to the ML estimates (Allison, 2002). Unlike conventional regression imputation, in which decisions must be made on which variables to use as predictors, the EM algorithm starts with a full covariance matrix and uses all available variables as predictors for imputing missing data.

Allison (2002) showed that applying the EM statistics to variables with up to 45% missing data yielded similar regression coefficients as regression estimates derived from listwise deletion. The frequency of each continuous variable in this study was examined. The highest percentage of missing data was from variables used to measure students' socio-economic status (i.e., African American=20% missing from mother's educational level; Asian Pacific American=15.1% missing from mother's educational level; Latino=17.6% missing from father's educational level; and White=11.9% missing from estimate of family income). All other continuous variables had missing frequencies of less than 15%. Therefore, it was deemed appropriate to use the EM algorithm to replace missing values within each racial/ethnic group based on Allison's (2002) example. Only the variables identified for use in the regression analyses (and structural equation

modeling) were included in the missing value analyses. The missing value analyses were conducted separately for each racial/ethnic group using the EM algorithm function in SPSS version 11.5.

### *Exploratory Factor Analyses*

Factor analyses were conducted as a data reduction technique using the multiple survey measures reflected in the conceptual framework. These analyses resulted in the development of eleven factors that are relevant to this study of racial/ethnic identity development. These indices include: *pre-college sense of common fate, sense of common fate, White pre-college environment, predisposition to participate in diversity related experiences, negative climate for diversity, sense of belonging, positive interactions with diverse peers (IDP), negative interactions with diverse peers (IDP), interactions in an informal context, participation in diversity co-curricular activities, and reading materials on diversity*. Alpha reliabilities for these factors ranged from .565 to .902 (see Table E.1 and E.2). These factors allow me to begin to assess the impact of various aspects of college experience on racial/ethnic identity development.

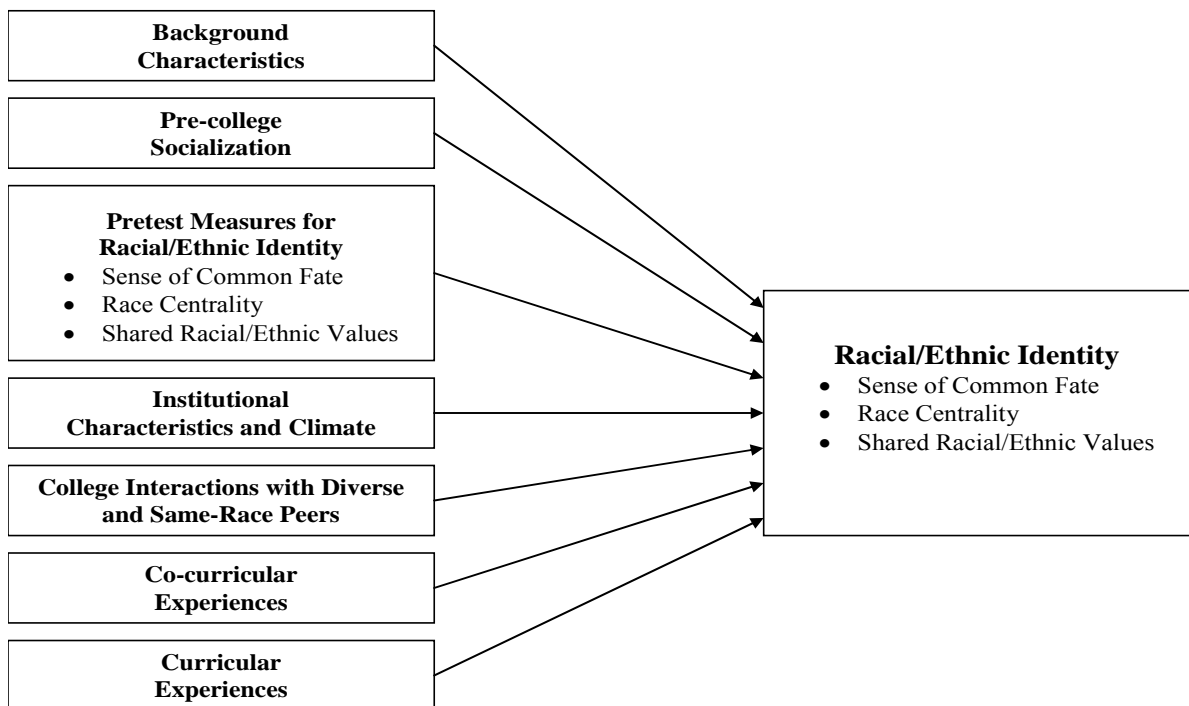
### **Research Design**

In order to integrate theories advanced in separate paradigms into one framework, this study utilizes an exploratory design (Creswell, 1994). Because this study examines the relationship between racial/ethnic identity development and college experiences, the primary organizational framework for this inquiry is Astin's (1993) inputs-environments-outcomes (I-E-O) model. The Astin I-E-O model posits that "outcomes," or student characteristics after exposure to college, are influenced both by (1) "inputs," or student characteristics before and at time-of-entry to college, and (2) "environments," or various



programs, policies, faculty, peers, and educational experiences that students interact with while in college (Astin, 1993).

While past studies on ethnic identity have assessed changes over the first year of college, as well as the impact of student involvement and friendship group on ethnic identity development, this particular study will address students' identity development in a college environment during their first two years of college. Specifically, this study examines three dimensions of racial/ethnic identity (i.e., sense of common fate, race centrality, and shared racial/ethnic values). It will also extend current research by paying particular attention to diversity-related college experiences.



**FIGURE 1.1** Conceptual framework for the impact of college experience on racial/ethnic identity development

As suggested by Astin (1993) and Chickering (1969), various pre-enrollment characteristics of students must be taken into account in order to understand the impact of experiences in college. For the present study, it was determined that pre-college sense of common fate, pre-college race centrality, pre-college shared racial/ethnic values, students' background characteristics, and pre-college socialization experiences were necessary pre-college characteristics and involvements to control. As illustrated in Figure 1.1, these pre-college measures, as well as institutional characteristics and climate, co-curricular experiences and curricular experiences are regressed on the outcome measures of racial/ethnic identity development. Blocked hierarchical regression analyses were conducted in order to observe how the different clusters of variables interact with the dependent variables (i.e., sense of common fate, race centrality, and shared racial/ethnic values) This analytic procedure holds the effects of the other blocks of variables constant while investigating the influence of one group of variables on the outcome measure.

The regression analysis for this study consists of seven blocks. Keeping in mind the specifications set by the conceptual framework, the independent variables were arranged in the following order of blocks:

- Block 1 ***Student background characteristics:*** Gender, race/ethnicity (*All Race group*); composite SAT score; mother's level of education; estimated family income (*All Race group*); and generation status in the U.S.
- Block 2 ***Pre-college socialization:*** Parental influence; White pre-college environment; pre-college frequency of interactions; pre-college

- experience of discrimination; and predisposition to participate in diverse related experiences
- Block 3 ***Pretest measures:*** Sense of common fate; race centrality; and shared racial/ethnic values
- Block 4 ***Institutional characteristics and climate:*** Structural diversity of institution; perception of negative climate for diversity; and sense of belonging
- Block 5 ***Interactions with diverse and same-race peers:*** Positive quality of interactions; negative quality of interactions; frequency of interactions; informal context for interactions (*All Race group*); and same race interactions
- Block 6 ***Co-curricular experiences:*** Participation in diversity co-curricular activities; participation in cultural organizations; and lived on-campus
- Block 7: ***Curricular experiences:*** Courses with diversity readings and materials; courses with intensive dialogue; and courses with service-learning

Table 3.1 (see below) describes the variable name, data source, and coding for each of variables used in this analysis. The item wording, factor loadings, and reliabilities for the relevant dependent and independent measures are outlined in Table E.1 and E.2 (see Appendix E).

**Table 3.1 Description of Variables**

<b>Variable Description</b>	<b>Data Source and Items Used</b>	<b>Coding</b>
<b><i>Dependent Variable</i></b>		
Sense of common fate	1 <sup>st</sup> and 2 <sup>nd</sup> year survey; Items 27a, 27b, 27e, and 27h	Scaled index, four items: 1=strongly disagree; 2=disagree somewhat; 3=agree somewhat; 4=strongly agree
Race centrality	1 <sup>st</sup> and 2 <sup>nd</sup> year survey; Items 26b and 26c	Single item, continuous: 1=never; 2=rarely; 3=sometimes; 4=often
Shared racial/ethnic values	1 <sup>st</sup> and 2 <sup>nd</sup> year survey; Items 28e thru 28e (1 <sup>st</sup> year) and Items 23a thru 23e(2 <sup>nd</sup> year)	Single item, continuous: 1=very different; 2=somewhat different; 3=somewhat similar; 4=very similar
<b>Student Background Characteristics</b>		
Gender	Institution	Dichotomous: 0=male; 1=female
Race ( <i>All Race group</i> )	Institution or 1 <sup>st</sup> year survey; Items 32a thru 32e	Dummy-coded: African American; Asian Pacific American; Latino; White (referent group)
Composite SAT or converted ACT score	Institution	Composite SAT score or converted ACT score (400-1600 scale). (See Appendix C for conversion chart.)
Mother's level of education	1 <sup>st</sup> year survey; Item 33m	Dummy-coded: High school graduate; College graduate; Graduate school (referent group)
Estimated family income ( <i>All Race group</i> )	1 <sup>st</sup> year survey; Item 34	Dummy-coded: Low income (0 – 19,999); Middle income (\$20,000 – \$59,999); Upper-middle income (\$60,000 – \$99,999); Upper income (\$100,000 or more) (referent group)
Generation status in the U.S.	1 <sup>st</sup> year survey; Item 35	Recoded to 3=1 <sup>st</sup> generation; 2=2 <sup>nd</sup> generation; 1=3 <sup>rd</sup> generation
<b><i>Pre-College Socialization</i></b>		
Parental influence	1 <sup>st</sup> year survey; Item 6m	Single item, continuous: 1=not at all important; 2=somewhat important; 3=very important; 4=essential
White pre-college environment	1 <sup>st</sup> year survey; Items 10a, 10b, and 10c	Scaled index, three items: 1=all or nearly all people of color; 2=mostly people of color; 3=half white and half people of color; 4=mostly white; 5=all or nearly all white
Pre-college frequency of interactions	1 <sup>st</sup> year survey; Items 19a thru 19e	Composite variable, continuous: 1=no interaction; 2=little interaction; 3=some regular interaction; 4=substantial interaction
Pre-college experience of discrimination	1 <sup>st</sup> year survey; Items 11a and 11b	Composite variable, continuous: 1=never; 2=occasionally; 3=frequently
Predisposition to participate in diversity related experiences	1 <sup>st</sup> year survey; Items 15k, 15l, and 15o	Scaled index, three items: 1=never; 2=seldom; 3=sometimes; 4=often; 5=very often

**Table 3.1 Description of Variables (cont.)**

<b>Variable Description</b>	<b>Data Source and Items Used</b>	<b>Coding</b>
<b><i>Institutional Characteristics and Climate</i></b>		
Low structural diversity	Institution	Dummy-coded: Low structural diversity; Moderate structural diversity; High structural diversity (referent group)
Moderate structural diversity	Institution	Dummy-coded: Low structural diversity; Moderate structural diversity; High structural diversity (referent group)
Perception of negative climate for diversity	2 <sup>nd</sup> year survey; Items 14d, 14i, and 14f	Scaled index, four items: 1=strongly disagree; 2=disagree somewhat; 3=agree somewhat; 4=strongly agree
Sense of belonging	2 <sup>nd</sup> year survey; Items 14e, 14h, and 14j	Scaled index, three items: 1=strongly disagree; 2=disagree somewhat; 3=agree somewhat; 4=strongly agree
<b><i>College Interactions with Diverse and Same Race Peers</i></b>		
Positive quality of interactions	2 <sup>nd</sup> year survey; Items 10b, 10d, and 10i	Scaled index, three items: 1=never; 2=seldom; 3=sometimes; 4=often; 5=very often
Negative quality of interactions	2 <sup>nd</sup> year survey; Items 10c, 10e, and 10f	Scaled index, three items: 1=never; 2=seldom; 3=sometimes; 4=often; 5=very often
Frequency of interactions	2 <sup>nd</sup> year survey; Items 18a thru 18e	Composite variable, continuous: 1=no interaction; 2=little interaction; 3=some regular interaction; 4=substantial interaction
Informal context of interactions ( <i>All Race group</i> )	2 <sup>nd</sup> year survey; Items 10a, 10g, 10h, and 10j	Scaled index, three items: 1=never; 2=seldom; 3=sometimes; 4=often; 5=very often
Same race interactions	2 <sup>nd</sup> year survey; Items 18a thru 18e	Single item, continuous: 1=no interaction; 2=little interaction; 3=some regular interaction; 4=substantial interaction
<b><i>Co-curricular Experience</i></b>		
Participation in diversity co-curricular activities	2 <sup>nd</sup> year survey; Items 11c, 11g, and 11h	Scaled index, three items: 1=never; 2=seldom; 3=sometimes; 4=often; 5=very often
Participation in cultural organizations	2 <sup>nd</sup> year survey; Item 6h	Dummy-coded: 0=no; 1=yes
Lived on-campus	1 <sup>st</sup> and 2 <sup>nd</sup> year survey; Item 14 (1 <sup>st</sup> year) and Item 29 (2 <sup>nd</sup> year)	Dummy-coded: With parents or relatives; Off-campus (not with parents); Fraternity or sorority; Residence hall/other campus housing (referent group)
<b><i>Curricular Experiences</i></b>		
Courses with diversity readings and materials	2 <sup>nd</sup> year survey; Items 15a, 15c, and 15a	Scaled index, three items: 1=none; 2=one; 3=two; 4=three or more
Courses with intensive dialogue	2 <sup>nd</sup> year survey; Item 15f	Single item, continuous: 1=none; 2=one; 3=two; 4=three or more
Courses with service-learning	2 <sup>nd</sup> year survey; Item 15d	Single item, continuous: 1=none; 2=one; 3=two; 4=three or more

## Measures Utilized in the Study

In the following sections, detailed information is provided on the dependent and independent measures used in the study. As previously mentioned, Table 3.1 describes the variable name, data source, and coding for each of the variables used in the analysis. The appendix includes additional information about the factor loadings and reliabilities for each of the factors used in this study.

### *Dependent Variables*

Racial/ethnic identity was operationalized through three measures—*sense of common fate*, *race centrality*, and *shared racial/ethnic values*. These concepts were chosen based upon prior research demonstrating their usefulness for measuring the cognitive and affective aspects of ethnic identity. Some items were relabeled (i.e., *social identity awareness* labeled *sense of common fate*) in an effort to maintain consistency with preexisting measures of ethnic identity and establish reliability with other studies.

The survey items that represent *sense of common fate* include: *I often think about what I have in common with others in my racial/ethnic group*; *It is important for me to educate others about the social identity groups to which I belong*; *I feel proud when a member of my racial/ethnic group accomplishes something outstanding*; and *I think that what generally happens to people in my racial/ethnic group will affect what happens in my life*. All four of these items have reliable factor loadings that are internally consistent at alpha level of .72. Each response was scored on a four-point Likert scale (1=strongly disagree to 4=strongly agree). *Race centrality*, as measured by *How often do you think about your race/ethnicity?*, has a scaled index ranging from 1 (never) to 4 (often). Lastly, *shared racial/ethnic values*, as measured by *Indicate whether you think each of the*

*following racial/ethnic groups have similar or different values and beliefs from your own,* has a scaled index ranging from 1 (very similar) to 4 (very different). The outcome measure, *shared racial/ethnic values*, represents students' perception of having values and beliefs that are similar (or different) from members of their racial/ethnic group. Students are expected to share similar values and beliefs with members of their racial/ethnic group.

### *Independent Variables*

The independent variables (see Table 3.1) included in this study were chosen from the literature review conducted and correspond to measures suggested in Astin's (1993) college impact model: input or student background characteristics, environment or collegiate experiences, and socialization measures. Students' background characteristics include measures for students' race/ethnicity, gender, family socio-economic status, generation status, and academic ability. Pre-college socialization measures include parental influence, White pre-college environment, pre-college experience of discrimination, pre-college frequency of interactions, and predisposition to participate in diversity-related experiences. Institutional climate and characteristics incorporates measure for institutional structural diversity, students' perception of the campus racial climate, and students' sense of belonging. College interactions with diverse and same race peers relates to students' positive quality of interactions, negative quality of interactions, frequency of interactions, interactions in an informal context (*All Race group*), and same race interactions. Co-curricular activities cover students' participation in diversity co-curricular activities, participation in cultural organizations and experience of living in a residence hall. Curricular activities include enrollment in courses with

diversity readings, enrollment in courses with intensive dialogues, and enrollment in courses with a service-learning component. These variables are discussed in further detail below.

### *Student Background Characteristics*

Six background characteristics were considered relevant to the study of the impact of college experience on racial/ethnic identity development. These characteristics include: *race/ethnicity (All Race group)*, *gender*, *mother's level of education*, *estimated family income (All Race group)*, *SAT/ACT scores*, and *generation status in the U.S.* The relevance of these background variables to student outcomes has been demonstrated in numerous studies (e.g., Pascarella & Terenzini, 1991; Astin, 1993a), thus justifying their inclusion in this study.

Gender is represented by a dichotomous variable with male being the referent category. Gender is an important variable to control for given the high number of women present in the sample (60%). In addition, previous studies suggest that females are more likely to predict higher scores across various democratic outcomes (Hurtado, Engberg, & Ponjuan, 2003) and undergo more thorough enculturation into their ethnic groups heritages (Phinney, 1990) than their male counterparts.

Dummy variables were used to represent the racial/ethnic backgrounds of White, African American, Latino, and Asian American/Pacific Islander respondents. White is the reference group for this set of dummy variables, which were only used in examining the All Race group. Information regarding students' race was collected directly from the participating institutions. These variables were deemed critical to research design because the model may reflect groups that are more or less likely to interact with diverse



others. College diversity experiences have been found to have a more pronounced effect on White students than students of color (e.g., Gurin, Dey, Hurtado, & Gurin, 2002; Lopez, 1993). Differences among ethnic minority groups have appeared in several studies including Gurin et al. who found differential effects for race groups in terms of the significance of classroom diversity in predicting outcomes such as racial/cultural engagement and citizenship engagement, respectively.

Socioeconomic status (SES) is a term applied to the combined attributes of social status (often expressed in terms of education and occupation) and economic status (often expressed in terms of income). For this study, both mother's level of education and estimated family income (*All Race group*) were used as a proxy for socioeconomic status. Both mother's level of education and estimated family income were dummy coded and graduate school classifications and upper-income level were used as referent groups, respectively. Research suggests that mother's education is usually predictive of students' racial attitudes and general tolerance (Smith, 1993; Taylor, 1994). Education can reflect background socialization regarding racial issues, as prejudicial attitudes toward others tend to decrease as individuals acquire more education.

The academic ability of respondents is measured by their score on the Scholastic Aptitude Test (SAT) or their converted ACT scores. In an effort to provide the most accurate assessment of students' ability possible, the host institutions were asked to provide information regarding students' SAT and ACT scores. Studies on racial attitudes and general levels of tolerance (Smith, 1993; Taylor, 1994) have shown that effect of SAT scores is indirect. Generation status in the U.S. is being included to help control for the experience of being an immigrant, which may "trigger" the ethnic identity exploration

process (Verkuyten & Brug, 2002). Generation status is likely to be important for the students in this study because of the recent immigrant background of many Asian and Latin American adolescents.

### *Pre-college Socialization*

Five different measures are included in this study to represent student's pre-college socialization including *parental influence*, *White pre-college environment*, *pre-college frequency of interactions*, *pre-college experience of discrimination*, and *predisposition to participate in diversity related experiences*. Parental influence is measured by a single-item, continuous variable which asks students to describe the importance of parents/guardians, family members, and friends in their decision to attend their selected university. Each response was scored on a four-point Likert scale (1=not at all important to 4=essential). White pre-college environment is a three-item scaled index with a Cronbach's alpha of .85. The question asks students to describe the racial/ethnic composition of three pre-college environments: neighborhood where they grew up; high school that they graduated from; and their friends in high school. Student responses were measured on a five-point Likert scale (1=all or nearly all people of color; 2=mostly people of color; 3=half white and half people of color; 4=mostly white; 5=all or nearly all white).

Experience of discrimination was measured using a scaled index of two items that measured how often students encountered discrimination in high school based on their race/ethnicity and gender. A three-point Likert scale (1=never; 2=occasionally; 3=frequently) was used to measure student responses. Predisposition to participate in diversity related experiences is a three-item scaled index. Students are asked how likely

they are to do the following during their college career: join an organization that promotes cultural diversity; participate in groups and activities reflecting your own cultural-ethnic background; and take a course devoted to diversity issues in your first year of college. Student responses were measured on a four-point Likert scale (1=very unlikely; 2=unlikely; 3=likely; 4=very likely).

### *Institutional Climate and Characteristics*

The important influence that the institutional climate exerts on students' attitudes, values, and beliefs has been generally noted in the college impact research (Hurtado et al., 1999; Hurtado & Dey, 1997). Studies suggest that students' perceptions of a non-discriminatory climate for diversity will influence their openness to diversity and challenge (Pascarella et al., 1996; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001), whereas a hostile or tense climate results in a negative influence on students' development of democratic competencies (Hurtado et al., 2003).

The influence of institutional climate has been noted in research on college impact (Hurtado et al., 1999; Hurtado & Dey, 1997). Numerous studies suggest that students' openness to diversity and challenge are influenced by their perception of a non-discriminatory climate for diversity (Pascarella et al., 1996; Whitt et al., 2001). On the other hand, students' development of democratic competencies is negatively influenced by their perception of a tense or hostile climate (Hurtado, et al., 2003).

Four measures were developed to assess the impact of institutional characteristics and climate, including *low and moderate structural diversity*, *perception of negative climate for diversity*, and *sense of belonging*. The level of structural diversity is measured by a continuous variable representing the "numerical representation of various

racial/ethnic groups” on campus (Hurtado & Dey, 1997, p. 414). The institutional research department at each participating campus was contacted to obtain the percentage of students of color. The level of structural diversity is measured on a three-point Likert scale, which was recoded from the original six-point scale (1=low diversity to 3=high diversity).

Studies have shown that campuses that have high percentages of White students provide limited opportunities for cross-racial interaction and learning from diverse groups (Hurtado et. al., 1999; Hurtado, Dey, & Trevino, 1994). As campuses become more diverse, White students are more likely to socialize with other racial/ethnic groups and discuss racial and ethnic issues (Chang, 1996). Students are also likely to become more aware of other cultures and increase in their attention to what others have to say when campus racial climate is improved (Clements, 1997). Due to the variability in structural diversity among the participating campuses, students’ opportunities to interact with diverse peers may be markedly different.

The institutional climate for diversity is measured using a continuous variable, which assessed student’s perception of racial tension on the University campus. The following items measure the perception of negative institutional climate for diversity: *I have been singled out in class because of my race/ethnicity, gender or sexual orientation; There are a lot of racial tensions on the University campus; and I have heard faculty express stereotypes about racial/ethnic group in class.* The sense of belonging is composed of the following three items: *I see myself as a part of the university community; I feel that I am a member of the university community; and I feel a sense of belonging to this university.* A four-point Likert scale (1=strongly disagree to 4=strongly

agree) was used to measure whether students agreed or disagreed with the aforementioned statements.

### *Interaction with Diverse Peers*

Few studies exist highlighting the relationship between intergroup contact and racial/ethnic identity. Research, however, suggests that students' interactions across race significantly impacts student outcomes (Gurin, et al., 2002; Hurtado, Engberg, Ponjuan, & Landreman, 2002). Measures related to interactions with diverse and same race peers include *positive quality of interaction*, *negative quality of interaction*, *interactions in an informal context*, *frequency of interaction diverse peers*, and *frequency of interactions with same race peers*.

The history of race relations in the United States has shown that all encounters with diverse peers will not be positive and meaningful experiences. Because some intergroup relations are negative, it is expected that negative interaction with diverse peers will not produce the same learning outcomes that are associated with positive interactions. Hurtado, Engberg, and Ponjuan (2003) found that quality of interaction with diverse peers engenders the most change over and above the frequency of IDP on democratic outcomes. The extent to which students engage in interactions that are personable, meaningful and honest, rather than guarded or tense, have a positive impact on outcomes related to democratic learning and development. Therefore, the present study extends the existing body of literature by exploring the *quality* of interaction with diverse peers to assess how both positive and negative intercultural interactions influence the development of ethnic identity.

A four-item index was used to measure interactions in an informal context, which was only used in examining the All Race group. Students were asked how often they engaged in the following: dined or shared a meal; studied or prepared for class; and attended events sponsored by other racial/ethnic groups. The frequency and positive quality of interaction with diverse peers was measured by a three-item index asking students how often they did the following: had meaningful and honest discussions about race/ethnic relations outside of class; shared personal feelings and problems; and had intellectual discussions outside of class. Similarly, the frequency and negative quality of interaction with diverse peers was measured by a three-item index asking students how often they did the following: had intense, somewhat hostile interactions; felt insulted or threatened based on my race or ethnicity; and had guarded, cautious interactions. All three measures were scored on a five-point Likert scale (1=never, 2=seldom, 3=sometimes, 4=often, 5=very often).

Beyond examining the quality and context of diverse peer interactions, this study also measured the frequency of interactions with diverse and same race peers. The amount of diverse peer interactions is measured by students' responses to how much interaction they had with people in each of these groups: (a) African Americans/Blacks; (b) Hispanics/Latinos/Chicanos; (c) Asian Pacific Americans/Pacific Islanders; (d) Whites/Caucasians; and (e) American Indians/Alaskan Natives. These items were recoded into a composite variable based on the respondent's race, so that the variable measures interaction with others who are a different race from one's own. Same-race interaction measured the amount of contact respondents had with members of their own

racial/ethnic group. Interactions with diverse and same race peers were scored on a five-point Likert scale (1=no interaction to 4=substantial interaction).

### *Co-Curricular Experiences*

Co-curricular experiences included in this study are as follows: *student participation in diversity co-curricular activities, participation in cultural organizations, and living on-campus*. Students' participation in diversity co-curricular activities is a three-item scaled index which included the following: Campus organized discussion on racial/ethnic issues; diversity awareness workshops; and events or activities sponsored by groups reflecting you own cultural heritage. Students were asked to indicate their frequency of participation along a five-point Likert scale (1=never, 2=seldom, 3=sometimes, 4=often, 5=very often). Students' participation in cultural organizations is represented by a dichotomous variable which measures student responses to joining an organization reflecting their own cultural heritage.

Living on-campus has been reported as having a positive influence on students' growth and development (Lacy, 1978; Pascarella, Bohr, Nora, & Terenzini, 1995; Whitt et al., 2001). Students were asked to indicate their living arrangements during their first and second year of college: (a) with parents or relatives, (b) off-campus (not with family), (c) fraternity or sorority; or (d) on-campus in residence halls or other campus housing. On-campus housing serves as the referent group for this set of constructs.

### *Curricular Experiences*

Curricular experiences measured in this study include courses with diversity readings and materials, courses with intensive dialogue, and courses with a service-learning component. The measure, courses with diversity readings and materials, is

composed of three items: material/readings on race and ethnicity issues; material/readings on issues of oppression; and material/readings on gender issues. Students also indicated the number of courses they enrolled in that included: 1) opportunities for intensive dialogue between students with different backgrounds and beliefs; and 2) an experience serving communities in need (e.g., service-learning). All three measures of curricular experiences were scored on a four-point Likert scale (1=none to 4=three or more).

### **Limitations**

Several methodological limitations have implications for generalizability and should be considered when interpreting the results presented in this study. First, this study was conducted using previously collected data. The survey instruments used to collect the student data were not originally designed to measure racial/ethnic identity development. The outcome measures utilized in this study are based on a review of the literature. While the measures are considered comparable to previously studied dimensions of racial/ethnic identity, they have not been validated for measuring racial/ethnic identity.

Secondly, it is important to remember that not all students who were sent a survey returned one. In addition, the study depends on self-reported measures, which are susceptible to social desirability, meaning that students may provide answers that they believe to be more politically correct, rather than indicate one's true attitudes and behaviors. Therefore, the influence of social desirability and personal perceptions must be taken into account when interpreting our results.

Thirdly, the sample consists of data collected at nine, four-year public institutions. Given this limited number of institutions, it is not possible to generalize the results to all



four-year institutions in the United States. The wide range of U.S. higher education institutional types, such as community colleges, smaller public institutions and private institutions were not addressed in this study, therefore results cannot be applied to all types of colleges and universities.

Lastly, the study may have been influenced by social and political situations which took place during the study, specifically the events of 9/11. The salience of the “war on terrorism” and perceived national threat may have influenced responses by minimizing participants’ focus on their individual racial/ethnic group membership.

### **Summary**

This chapter covered the research methodology used to investigate the relationship between racial/ethnic identity development and diversity-related college experiences. It highlighted the theoretical framework, research design, and data collection and analysis techniques relevant to this study. The limitations of the study were also reviewed. Chapter 4 shares the research results followed by in-depth discussion of the findings and recommendations in Chapter 5.

## CHAPTER 4

### RESULTS

The purpose of this exploratory study was to elucidate the diversity-related college experiences associated with racial/ethnic identity development. The demographic and high school academic characteristics of the students in this study are outlined in Table 4.1 (see below). In terms of demographic characteristics, females constitute 60% of the participants. The racial/ethnic make-up of the sample is 69% White and 31% non-white. Of the students of color, Asian Pacific American students comprise 16% of the population, Latino students equal 9%, African American students equal 5%, and Native

**Table 4.1 Background Characteristics of the Total Sample in Percentages ( $n = 4403$ )**

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<b><i>Gender</i></b>	
Male	40%
Female	60%
<b><i>Racial/Ethnic Background</i></b>	
Native American	1%
African American	5%
Latino	9%
Asian	16%
White	69%
<b><i>Estimated Family Income</i></b>	
Low income level	6%
Middle income level	29%
Upper-middle income level	25%
Upper income level	40%
<b><i>Mother's Level of Education</i></b>	
High school	6%
College	37%
Graduate	57%
<b><i>SAT or Converted ACT score</i></b>	1170.46

---

American students equal 1%. The percentage of Native American students is extremely small resulting in a 2:1 ratio of cases to independent variables in the model. The small number of cases for Native American students underscores the decision to omit this group from this study. For this study, mothers' level of education and estimated family income (*All Race group*) are used as comparable measures of SES. A large percentage of students (65%) reported being from families where the estimated income level was upper-middle or greater and the majority of mothers (94%) had obtained a baccalaureate or higher. The students surveyed also had a mean SAT score of 1170 or higher.

Five hierarchical multiple regression equations (one for the All Race group and each of the racial/ethnic groups) were conducted to examine the influence that various background characteristics, pre-college socialization, institutional characteristics and climate, interactions with diverse peers, co-curricular experiences and curricular experiences have on students' racial/ethnic identity development. Prior to the regression analyses, Pearson correlations (see Appendix F) were conducted to determine the strength and direction of the relationships among the independent and dependent variables. The primary interest of this study is in understanding how the same model might explain the outcomes for different racial/ethnic groups. In each model, the pretest measure for the racial/ethnic identity outcome under investigation (i.e., sense of common fate, race centrality, and shared racial/ethnic values), students' background characteristics, and pre-college socialization experiences were controlled. The adjusted R-squares suggest that the model fits the data well, accounting for between 15% and 38% of the variance for sense of common fate, between 19% and 35% of the variance for race centrality, and between 18% and 39% of the variance for shared racial/ethnic values.

A full regression model was used for the All Race group while a modified model, which omitted estimated family income and informal context of interactions, was employed for examining the individual racial/ethnic groups. This analytical approach allowed for a fuller and richer comparison between the four racial/ethnic groups. The regression results of this study are presented below in two sections: 1) All Race group and 2) individual racial/ethnic groups.

### **Multivariate Regression Results for the All Race Group**

The results for the three hierarchical multiple regressions conducted for the All Race group are shown in Table 4.2 (see table below). The models explain 36%, 32%, and 20% of the variance in sense of common fate, race centrality and shared racial/ethnic values, respectively. Background and pre-college socialization variables which cause students to feel a greater sense of common fate include: female gender ( $\beta = .037, p < .01$ ), African American racial/ethnic background ( $\beta = .054, p < .001$ ), Asian Pacific American racial/ethnic background ( $\beta = .031, p < .05$ ), Latino racial/ethnic background ( $\beta = .043, p < .05$ ), parental influence ( $\beta = .029, p < .05$ ), and predisposition to participate in diversity experiences ( $\beta = .065, p < .001$ ). Other variables which had a positive influence include the pretest measure of common fate ( $\beta = .323, p < .001$ ), negative climate for diversity ( $\beta = .061, p < .001$ ), sense of belonging ( $\beta = .068, p < .001$ ), positive ( $\beta = .047, p < .05$ ) and negative ( $\beta = .052, p < .001$ ) quality of interactions, diversity co-curricular activities ( $\beta = .102, p < .001$ ), participating in cultural organizations ( $\beta = .009, p < .001$ ), and enrolling in courses with diversity reading and materials ( $\beta = .047, p < .01$ ). Students' sense of common fate is negatively affected by: high school academic performance ( $\beta = -.075, p < .001$ ), generational status ( $\beta = -.098, p < .001$ ), White pre-

**Table 4.2 Results of Blocked Hierarchical Regressions for Racial Identity Development Outcomes—All Race Group (n = 4403)**

Variable	Sense of Common Fate		Race Centrality		Shared Racial/Ethnic Values	
	$\beta$	b	$\beta$	b	$\beta$	b
<b>Student Background Characteristics</b>						
Gender (Female)	.037	.064**	.000	.000	.019	.027
American Indian (White)	.015	.121	-.020	-.165	.000	.000
African American (White)	.054	.209***	.062	.250***	.050	.161***
Asian Pacific American (White)	.031	.073*	.077	.187***	.070	.134***
Latino (White)	.043	.130**	.035	.112**	.060	.150***
Low Income Level (Upper)	.011	.039	-.023	-.088	-.007	-.022
Middle Income Level (Upper)	.007	.012	.001	.003	-.023	-.035
Upper Middle Income Level (Upper)	.021	.040	.005	.010	.012	.019
Composite SAT Score	-.075	-3.82E-04***	-.004	-2.41E-05	-.064	-2.71E-04***
High School (Graduate School)	.019	.069	.024	.093	.003	.008
College (Graduate School)	-.009	-.016	.013	.025	.017	.025
Generation status in the U.S.	-.098	-.072***	-.032	-.024	.026	.016
	R <sup>2</sup> = .145	$\Delta R^2 = .145$ ***	R <sup>2</sup> = .129	$\Delta R^2 = .129$ ***	R <sup>2</sup> = .022	$\Delta R^2 = .022$ ***
<b>Pre-college Socialization</b>						
Parental Influence	.029	.025*	.014	.013	.027	.020*
White pre-college environment	-.032	-.029*	-.062	-.060***	.028	.022
Pre-college frequency of interactions	-.040	-.057**	-.024	-.035	-.007	-.009
Pre-college experience of discrimination	.004	.009	-.002	-.005	-.021	-.040
Predisposition to participate in diversity related experiences	.065	.065***	.066	.069***	-.027	-.022
	R <sup>2</sup> = .222	$\Delta R^2 = .077$ ***	R <sup>2</sup> = .182	$\Delta R^2 = .053$ ***	R <sup>2</sup> = .028	$\Delta R^2 = .066$ ***
<b>Pretest Measures</b>						
Racial identity development (Time 1)	.323	.327***	.330	.327***	.320	.298***
	R <sup>2</sup> = .314	$\Delta R^2 = .092$ ***	R <sup>2</sup> = .279	$\Delta R^2 = .097$ ***	R <sup>2</sup> = .157	$\Delta R^2 = .129$ ***
<b>Institutional Characteristics and Climate</b>						
Low Structural Diversity (High)	-.027	-.049	-.018	-.034	.022	.033
Moderate Structural Diversity (High)	.003	.005	-.007	-.014	.046	.075**
Negative climate for diversity	.061	.071***	.082	.100***	-.050	-.048**
Sense of belonging	.068	.061***	.015	.014	.046	.034***
	R <sup>2</sup> = .332	$\Delta R^2 = .018$ ***	R <sup>2</sup> = .297	$\Delta R^2 = .018$ ***	R <sup>2</sup> = .164	$\Delta R^2 = .007$ ***

\*p<.05; \*\*p<.01; \*\*\*p<.001

$\beta$ =standardized regression weight; b=unstandardized regression weight for comparison across groups

R<sup>2</sup>=Cumulative Adjusted R<sup>2</sup>;  $\Delta R^2$ =Change in Adjusted R<sup>2</sup>

**Table 4.2 Results of Blocked Hierarchical Regressions for Racial Identity Development Outcomes—All Race Group (n = 4403) (cont.)**

Variable	Sense of Common Fate		Race Centrality		Shared Racial/Ethnic Values	
	$\beta$	b	$\beta$	b	$\beta$	b
<b>College Interactions with Diverse and Same Race Peers</b>						
Positive quality of interactions	.047	.045 *	.038	.038	-.057	-.045 **
Negative quality of interactions	.052	.053 ***	.086	.093 ***	.017	.014
Frequency of interactions	.017	.028	.015	.027	-.024	-.034
Same race interactions	.005	.008	-.020	-.033	.217	.283 ***
Informal context of interactions	-.029	-.028	-.028	-.028	.063	.052 **
	R <sup>2</sup> = .339	$\Delta R^2 = .007^{***}$	R <sup>2</sup> = .306	$\Delta R^2 = .009^{***}$	R <sup>2</sup> = .200	$\Delta R^2 = .036^{***}$
<b>Co-Curricular Experiences</b>						
Participation in diversity co-curricular activities	.102	.099 ***	.052	.053 ***	.004	.003
Participation in cultural organizations	.099	.231 ***	.064	.156 ***	-.004	-.009
Lived on-campus	.002	.004	.009	.021	-.004	-.007
	R <sup>2</sup> = .358	$\Delta R^2 = .019^{***}$	R <sup>2</sup> = .312	$\Delta R^2 = .006^{***}$	R <sup>2</sup> = .200	$\Delta R^2 = .000^{***}$
<b>Curricular Experiences</b>						
Courses with diversity readings and materials	.047	.044 **	.124	.123 ***	-.012	-.009
Courses with intensive dialogue	-.005	-.004	-.028	-.023	.004	.003
Courses with service-learning	.003	.003	-.013	-.016	.015	.014
	R <sup>2</sup> = .359	$\Delta R^2 = .001^{***}$	R <sup>2</sup> = .323	$\Delta R^2 = .011^{***}$	R <sup>2</sup> = .200	$\Delta R^2 = .001^{***}$

\*p<.05; \*\*p<.01; \*\*\*p<.001

$\beta$ =standardized regression weight; b=unstandardized regression weight for comparison across groups

R<sup>2</sup>=Cumulative Adjusted R<sup>2</sup>;  $\Delta R^2$ =Change in Adjusted R<sup>2</sup>

college environment ( $\beta = -.032, p < .05$ ), and pre-college interactions with diverse peers ( $\beta = -.040, p < .01$ ).

While each block of variables made a significant contribution, the following independent variables were nonsignificant: American Indian racial/ethnic background, income level, mother's level of education, pre-college experience of discrimination, White pre-college environments structural diversity, frequency of interactions, interactions with diverse others in an informal context, same race interactions, living on-campus, courses with intensive dialogue, and courses with service-learning.

As mentioned above, the regression model explains 32% of the variance in all students' race centrality. The results for the all race group reflect 11 significant independent variables with all blocks making a significant contribution to the overall variance. Not surprisingly, the pretest measure of race centrality at college entry ( $\beta = .330, p < .001$ ) has the most effect on students' race centrality during the second year of college. The seven strongest predictors, each representing one of the other six blocks, include: African American racial/ethnic background ( $\beta = .062, p < .001$ ), Asian Pacific American racial/ethnic background ( $\beta = .077, p < .001$ ), predisposition to participate in diversity related experiences ( $\beta = .066, p < .001$ ), negative climate for diversity ( $\beta = .082, p < .001$ ), negative quality of interaction ( $\beta = .086, p < .001$ ), participation in diversity co-curricular activities ( $\beta = .052, p < .001$ ), participation in cultural organizations ( $\beta = .064, p < .001$ ), and courses with readings and materials on diversity ( $\beta = .124, p < .001$ ). Having a Latino racial/ethnic background ( $\beta = .035, p < .01$ ) also causes a positive change in students' race centrality. Being from a White pre-college environment ( $\beta = -$

.062,  $p < .000$ ) is the only measure which causes a significant negative change in students' race centrality.

All seven blocks of variables helped to explain the variance in racial/ethnic values ( $R^2 = 20\%$ ). In addition to the pretest measure of racial/ethnic values ( $\beta = .320$ ,  $p < .001$ ), African-American racial/ethnic background ( $\beta = .050$ ,  $p < .001$ ), Asian Pacific American racial/ethnic background ( $\beta = .070$ ,  $p < .001$ ), Latino racial/ethnic background ( $\beta = .060$ ,  $p < .001$ ), and parental influence ( $\beta = .027$ ,  $p < .05$ ) cause students to rate themselves higher on racial/ethnic values. Other variables that positively influence racial/ethnic values include: moderate structural diversity ( $\beta = .046$ ,  $p < .01$ ), sense of belonging ( $\beta = .046$ ,  $p < .01$ ), same race interactions ( $\beta = .217$ ,  $p < .001$ ), and informal context for interaction ( $\beta = .063$ ,  $p < .01$ ).

On the other hand, there are three variables that have a negative effect on this racial/ethnic identity measure for all students. They include: high school academic performance ( $\beta = -.064$ ,  $p < .001$ ), negative climate for diversity ( $\beta = -.050$ ,  $p < .001$ ), and positive quality of interactions ( $\beta = -.057$ ,  $p < .01$ ). Shared racial/ethnic values are significantly weakened by these variables.



### Chi-Square, ANOVA, and Scheffe's Post-hoc Tests

One of the goals of this study was to understand how diversity-related college experiences differentially affect the racial identity development of White, Asian Pacific American, African American and Latino students. Results from the regression analysis conducted on the All Race group suggest a difference exists in White and non-White students' racial identity development. A chi-square test was conducted for each racial/ethnic identity outcome measure to determine if students differ in how they rate themselves on their sense of common fate, race centrality, and shared racial/ethnic values. As highlighted in Table 4.3, Table 4.4, and Table 4.5, significant differences do exist among the four racial/ethnic groups.

**Table 4.3 Students' Sense of Common Fate – Time 2 by Race/Ethnicity (in Percentages)**

	<b>African American</b> (n=223)	<b>Latino</b> (n=378)	<b>Asian Pacific American</b> (n=701)	<b>White</b> (n=3051)	<b>Chi-Square</b>
<i>Sense of Common Fate – Time 2</i>					
Strongly disagree	0.0	1.0	1.6	4.2	$x^2=333.98$ $df=12$ $p<.001$
Disagree somewhat	3.2	12.8	13.7	33.9	
Agree somewhat	62.8	65.5	61.7	55.2	
Strongly agree	34.0	20.8	22.9	6.6	

**Table 4.4 Students' Race Centrality – Time 2 by Race/Ethnicity (in Percentages)**

	<b>African American</b> (n=223)	<b>Latino</b> (n=378)	<b>Asian Pacific American</b> (n=701)	<b>White</b> (n=3051)	<b>Chi-Square</b>
<i>Race Centrality – Time 2</i>					
Never	2.2	8.0	3.7	15.1	$x^2=577.07$ $df=12$ $p<.001$
Rarely	7.4	22.1	16.7	39.9	
Sometimes	42.1	42.6	44.1	34.5	
Often	48.3	27.3	35.4	10.5	

**Table 4.5 Students' Shared Racial/Ethnic Values – Time 2 by Race/Ethnicity**  
(in Percentages)

	<b>African American</b> (n=223)	<b>Latino</b> (n=378)	<b>Asian Pacific American</b> (n=701)	<b>White</b> (n=3051)	<b>Chi-Square</b>
<i>Shared Racial/Ethnic Values – Time 2</i>					
Very different	3.4	2.4	1.5	2.1	$\chi^2=43.20$ $df=12$ $p<.001$
Somewhat different	12.8	11.2	10.4	7.0	
Somewhat similar	30.2	33.7	38.5	36.7	
Very Similar	53.6	52.7	49.6	54.2	

Next, ANOVA and Scheffe's post-hoc tests were performed to understand whether there were mean differences across racial/ethnic groups in terms of their racial/ethnic identity (i.e., sense of common fate, race centrality, and shared racial/ethnic values) at the time of matriculation (Time 1) and at the end of the second year of college

**Table 4.6 One-Way ANOVA Results for Racial/Ethnic Identity Development Variables Across Racial/ Ethnic Groups (T1 and T2)**

		Sum of Squares	df	Mean Square	F
Social Identity Awareness Time 1	Between Group	220.240	3	73.413	170.342***
	Within Groups	1710.543	3969	.431	
	Total	1930.783	3978		
Social Identity Awareness Time 2	Between Group	192.252	3	64.084	171.456***
	Within Groups	1506.273	4030	.374	
	Total	1698.526	4033		
Race Centrality Time 1	Between Group	494.781	3	164.927	221.274***
	Within Groups	2994.084	4017	.745	
	Total	3488.865	4020		
Race Centrality Time 2	Between Group	432.585	3	144.195	197.216***
	Within Groups	2983.100	4080	.731	
	Total	3415.685	4083		
Shared Racial/Ethnic Values Time 1	Between Group	7.574	3	2.525	4.009**
	Within Groups	2460.580	3907	.630	
	Total	2468.154	3910		
Shared Racial/Ethnic Values Time 2	Between Group	4.247	3	1.416	2.658*
	Within Groups	2124.346	3988	.533	
	Total	2128.593	3991		

\*p<.05, \*\*p<.01, \*\*\*p<.001

(Time 2). With the exception of shared racial/ethnic values at Time 1 and Time 2, the between group differences are highly significant ( $p < .001$ ) across of the racial/ethnic identity measures. That is, students have significantly different levels of racial/ethnic identity development (i.e., sense of common fate and race centrality) when they enter college and at the end of their second year of college.

In order to clearly understand the ANOVA results, Scheffe's post-hoc test of mean differences was conducted for each of the one-way ANOVAs. This test is particularly useful when analyzing groups with unequal sample sizes. The results for each of the post-hoc tests are shown in Tables 4.7 through 4.12. In examining the results of the Scheffe post-hoc test, African American students exhibit the strongest sense of common fate (Time 1 and Time 2), which is significantly higher ( $p < .05$ ) than White, Asian Pacific American, and Latino students. Similarly, Asian Pacific American and Latino students have a higher sense of common fate ( $p < .05$ ) than their White counterparts, both prior to college and at the end of the second year of college. This pattern suggests that majority students tend to enter college with a weaker sense of common fate compared to minority students.

**Table 4.7 Scheffe's Post-hoc Analysis of Mean Differences for Precollege Sense of Common Fate by Racial/Ethnic Group**

Racial/Ethnic Group	Mean	Standard Deviation
White	2.59	.680
Asian American	3.06	.620
Latino	3.06	.602
African American	3.30	.501

\*significant difference at  $p < .05$

**Table 4.8 Scheffe's Post-hoc Analysis of Mean Differences for Second-Year Sense of Common Fate by Racial/Ethnic Group**

Racial/Ethnic Group	Mean	Standard Deviation
White	2.39	.498
Asian American	2.81	.614
Latino	2.79	.599
African American	3.07	.619

\*significant difference at  $p < .05$

In examining students' precollege race centrality, African American students ( $M = 3.20$ ) had the highest mean followed by Asian Pacific American students ( $M = 3.06$ ). Both groups have means that are significantly higher ( $p < .05$ ) than White ( $M = 2.26$ ) and Latino ( $M = 2.81$ ) students. Latino students' precollege race centrality is also significantly higher ( $p < .05$ ) than that of White students. Given that the majority of White students in this study are from a predominantly White background, they may have placed little emphasis on race or spent little time thinking about race. Similar to their sense of common fate, the race centrality of African American students after the first two years of college is significantly higher ( $p < .05$ ) than that of White, Asian Pacific American and Latino students. Asian Pacific American students' race centrality at Time 2 is significantly higher ( $p < .05$ ) than that of White and Latino students while Latino students' race centrality is significantly higher ( $p < .05$ ) than White students.

**Table 4.9 Scheffe's Post-hoc Analysis of Mean Differences for Precollege Race Centrality by Racial/Ethnic Group**

Racial/Ethnic Group	Mean	Standard Deviation
White	2.26	.862
Asian American	3.06	.844
Latino	2.81	.936
African American	3.20	.816

\*significant difference at  $p < .05$

**Table 4.10 Scheffe's Post-hoc Analysis of Mean Differences for Second-Year Race Centrality by Racial/Ethnic Group**

Racial/Ethnic Group	Mean	Standard Deviation
White	2.40	.868
Asian American	3.11	.812
Latino	2.89	.897
African American	3.36	.718

\*significant difference at  $p < .05$

There were no significant differences across the racial/ethnic groups in terms of shared racial/ethnic values at Time 1 and Time 2. It may be possible that shared racial/ethnic values is an identity construct that remains stable and consistent across time. Also, shared racial/ethnic values may form early in students' lives and alter little as a

result of college experiences. Thus, college experiences are not expected to significantly impact students' shared racial/ethnic values at the end of their second year of college.

**Table 4.11 Scheffe's Post-hoc Analysis of Mean Differences for Precollege Shared Racial/Ethnic Values by Racial/Ethnic Group**

<b>Racial/Ethnic Group</b>	<b>Mean</b>	<b>Standard Deviation</b>
White	3.44	.779
Asian American	3.39	.781
Latino	3.34	.859
African American	3.28	.779

\*significant difference at  $p < .05$

**Table 4.12 Scheffe's Post-hoc Analysis of Mean Differences for Second-Year Shared Racial/Ethnic Values by Racial/Ethnic Group**

<b>Racial/Ethnic Group</b>	<b>Mean</b>	<b>Standard Deviation</b>
White	3.43	.716
Asian American	3.36	.729
Latino	3.37	.776
African American	3.34	.830

\*significant difference at  $p < .05$

The ANOVA and Scheffe's post-hoc tests reveal interesting results that may guide the interpretation of subsequent analyses performed in this study. First, the rise in certain measures of racial/ethnic identity and decline in others supports the view of racial/ethnic identity as a multidimensional construct. Secondly, based on the group means at Time 1 and Time 2, it appears that college experience has a differential impact on the racial/ethnic identity development of White, Asian Pacific Americans, Latino, and African American students. At the end of the second year of college, African American

and Latino students show a positive change in race centrality and shared racial/ethnic values while White and Asian Pacific American students show an increase in race centrality and a decline in shared racial/ethnic values. Despite this variability, students are not significantly different in their shared racial/ethnic values during Time 1 or Time 2. As previously suggested, racial/ethnic values may be a racial/ethnic identity construct that remains consistent over time and varies little with college experience. Lastly,, White students are entering college with lower levels of racial/ethnic identity development, particularly as it relates to their sense of common fate and race centrality, than their Asian Pacific American, Latino, and African American counterparts. Consistent with prior research, these students also remain behind their minority counterparts at the end of there second year of college.

### **Multivariate Regression Results for White, Asian Pacific American, African American, and Latino Students**

#### *White Students*

The results for the three hierarchical multiple regressions conducted for the White group are presented below (see Table 4.13). Six variables, including pretest measure of sense of common fate ( $\beta = .332, p < .001$ ), predisposition to participate in diversity related activities ( $\beta = .062, p < .001$ ), negative climate for diversity ( $\beta = .076, p < .001$ ), sense of belonging ( $\beta = .070, p < .001$ ), participation in diversity co-curricular activities ( $\beta = .081, p < .001$ ), and participation in cultural organizations ( $\beta = .100, p < .001$ ), are the strongest positive predictors of White students' sense of common fate. Other variables with a significant positive effect on white students' sense of common fate include positive quality of interactions with diverse peers ( $\beta = .037, p < .05$ ) and negative quality of interactions with diverse peers ( $\beta = .041, p < .05$ ).

**Table 4.13 Results of Blocked Hierarchical Regressions for Racial Identity Development Outcomes—White (n = 3051)**

Variable	Sense of Common Fate		Race Centrality		Shared Racial/Ethnic Values	
	$\beta$	b	$\beta$	b	$\beta$	b
<b>Student Background Characteristics</b>						
Gender (Female)	.039	.067 *	-.019	-.032	.007	.010
Composite SAT Score	-.082	-4.44E-04 ***	-.008	-4.61E-05	-.057	-2.55E-04 **
High School (Graduate School)	.028	.157	.014	.081	-.031	-.148
College (Graduate School)	-.010	-.017	.010	.017	-.001	-.002
Generation status in the U.S.	-.086	-.077 ***	-.028	-.026	.072	.053 ***
	R <sup>2</sup> = .041	$\Delta$ R <sup>2</sup> = .041 ***	R <sup>2</sup> = .014	$\Delta$ R <sup>2</sup> = .014 ***	R <sup>2</sup> = .038	$\Delta$ R <sup>2</sup> = .038 ***
<b>Pre-college Socialization</b>						
Parental Influence	.030	.026	.039	.034 *	.015	.011
White pre-college environment	-.010	-.009	-.046	-.043 *	.081	.061 ***
Pre-college frequency of interactions	-.045	-.063 *	-.015	-.021	.035	.041
Pre-college experience of discrimination	.001	.002	-.008	-.019	-.033	-.064 *
Predisposition to participate in diversity related experiences	.062	.063 ***	.080	.082 ***	-.053	-.045 **
	R <sup>2</sup> = .113	$\Delta$ R <sup>2</sup> = .072 ***	R <sup>2</sup> = .076	$\Delta$ R <sup>2</sup> = .062 ***	R <sup>2</sup> = .069	$\Delta$ R <sup>2</sup> = .031 ***
<b>Prestest Measures</b>						
Racial identity development (Time 1)	.332	.333 ***	.326	.331 ***	.249	.232 ***
	R <sup>2</sup> = .225	$\Delta$ R <sup>2</sup> = .112 ***	R <sup>2</sup> = .186	$\Delta$ R <sup>2</sup> = .110 ***	R <sup>2</sup> = .144	$\Delta$ R <sup>2</sup> = .075 ***
<b>Institutional Characteristics and Climate</b>						
Low Structural Diversity (High)	-.031	-.053	-.038	-.067	-.008	-.012
Moderate Structural Diversity (High)	-.002	-.005	-.025	-.049	.019	.030
Negative climate for diversity	.076	.096 ***	.089	.114 ***	-.066	-.069 ***
Sense of belonging	.070	.062 ***	.015	.013	.070	.050 ***
	R <sup>2</sup> = .247	$\Delta$ R <sup>2</sup> = .022 ***	R <sup>2</sup> = .207	$\Delta$ R <sup>2</sup> = .021 ***	R <sup>2</sup> = .156	$\Delta$ R <sup>2</sup> = .012 ***
<b>College Interactions with Diverse and Same Race Peers</b>						
Positive quality of interactions	.037	.035 *	.014	.013	-.012	-.009
Negative quality of interactions	.041	.042 *	.076	.079 ***	.009	.008
Frequency of interactions	.021	.033	.025	.042	-.003	-.004
Same race interactions	-.044	-.119 **	-.027	-.074	.161	.357 ***
	R <sup>2</sup> = .256	$\Delta$ R <sup>2</sup> = .009 ***	R <sup>2</sup> = .216	$\Delta$ R <sup>2</sup> = .009 ***	R <sup>2</sup> = .177	$\Delta$ R <sup>2</sup> = .021 ***
<b>Co-Curricular Experiences</b>						
Participation in diversity co-curricular activities	.081	.078 ***	.047	.046 **	-.014	-.011
Participated in cultural organizations	.100	.311 ***	.055	.172 ***	-.025	-.064
Lived on-campus	.016	.037	.032	.075	.021	.042
	R <sup>2</sup> = .272	$\Delta$ R <sup>2</sup> = .016 ***	R <sup>2</sup> = .222	$\Delta$ R <sup>2</sup> = .006 ***	R <sup>2</sup> = .177	$\Delta$ R <sup>2</sup> = .000 ***
<b>Curricular Experiences</b>						
Courses with diversity readings and materials	.034	.031	.120	.113 ***	-.028	-.022
Courses with intensive dialogue	.005	.004	-.021	-.016	.012	.007
Courses with service-learning	.002	.002	-.005	-.005	.015	.014
	R <sup>2</sup> = .273	$\Delta$ R <sup>2</sup> = .001 ***	R <sup>2</sup> = .232	$\Delta$ R <sup>2</sup> = .010 ***	R <sup>2</sup> = .177	$\Delta$ R <sup>2</sup> = .000 ***

\*p<.05; \*\*p<.01; \*\*\*p<.001  
 $\beta$ =standardized regression weight; b=unstandardized regression weight for comparison across groups  
R<sup>2</sup>=Cumulative Adjusted R<sup>2</sup>;  $\Delta$  R<sup>2</sup>=Change in Adjusted R<sup>2</sup>



Independent variables that are negatively related to white students' sense of common fate include: academic achievement ( $\beta = -.082, p < .001$ ), generation status ( $\beta = -.086, p < .001$ ), and same race interactions during college ( $\beta = -.044, p < .01$ ). The inferences suggested by these variables are that White students from a middle income background who perform well academically, have pre-college interactions with diverse peers, attend institutions with low structural diversity, and have same race interactions during college are less likely to share a sense of common fate with their White peers.

The model explains 23% of the variance in White students' race centrality. White students who grew up in a predominantly White pre-college environment ( $\beta = -.046, p < .05$ ) think less about their race than their White counterparts who presumably experienced diverse pre-college environments. Based on these findings, White students benefit from highly diverse pre-college environments as opposed to those environments that may be described as monocultural.

Race centrality for white students is positively associated with the pretest measure for race centrality ( $\beta = .326, p < .001$ ), parental influence ( $\beta = .039, p < .05$ ), predisposition to participate in diversity related experiences ( $\beta = .080, p < .001$ ), negative climate for diversity ( $\beta = .089, p < .001$ ), and negative quality of interactions with diverse peers ( $\beta = .076, p < .001$ ). This result suggests that taking into account White students' quality of interactions with other groups is important in determining how often they think about their own race. Additional variables that cause an increase in White students' race centrality are as follows: participation in diversity co-curricular activities ( $\beta = .047, p < .01$ ), participation in cultural organizations ( $\beta = .055, p < .001$ ), and enrolling in courses with readings and materials on diversity ( $\beta = .120, p < .001$ ).

The model explained 18% of the variance in White students' racial/ethnic values. Those White students who share common values with other Whites tend to have a high generational status ( $\beta = .072, p < .001$ ), grew up in a White pre-college environment ( $\beta = .081, p < .001$ ), have a sense of belonging to their institution ( $\beta = .070, p < .001$ ), and engage in same race ( $\beta = .161, p < .001$ ) interactions. Independent variables which cause students to decrease in their shared racial/ethnic values include high school academic performance ( $\beta = -.057, p < .01$ ), experience of discrimination ( $\beta = -.033, p < .05$ ), predisposition to participate in diversity related experiences ( $\beta = -.053, p < .01$ ), and negative climate for diversity ( $\beta = -.066, p < .001$ ). The unexpected significance of White students' experience of discrimination will be explored further in the discussion section.

#### *Asian Pacific American Students*

The results for the three hierarchical multiple regressions conducted for the Asian Pacific American group are shown in Table 4.14 (see table below). Similar to those in the White student group, Asian Pacific American (APA) students' sense of common fate and shared racial/ethnic values actually decrease during the first two years of college. This interesting finding will be explored in greater detail in the discussion section. Asian Pacific American students who have a sense of belonging to their institution ( $\beta = .089, p < .01$ ), participate in diversity co-curricular activities ( $\beta = .146, p < .001$ ), join organizations reflecting their own culture ( $\beta = .139, p < .001$ ) and enroll in courses with readings and materials on diversity ( $\beta = .084, p < .05$ ) have a higher sense of common fate than their peers. APA students' sense of common fate is negatively influenced by their generation status ( $\beta = -.112, p < .001$ ), meaning first generation students APA share

**Table 4.14 Results of Blocked Hierarchical Regressions for Racial Identity Development Outcomes—Asian Pacific American (n = 701)**

Variable	Sense of Common Fate		Race Centrality		Shared Racial/Ethnic Values	
	$\beta$	b	$\beta$	b	$\beta$	b
<b>Student Background Characteristics</b>						
Gender (Female)	.024	.041	-.011	-.017	.034	.047
Composite SAT Score	-.030	-1.41E-04	-.020	-8.90E-05	-.113	-4.39E-04 **
High School (Graduate School)	.067	.145	.018	.038	-.004	-.006
College (Graduate School)	-.010	-.018	.038	.063	.037	.055
Generation status in the U.S.	-.112	-.089 ***	-.061	-.045	-.094	-.062 **
	R <sup>2</sup> = .096	$\Delta$ R <sup>2</sup> = .096 ***	R <sup>2</sup> = .020	$\Delta$ R <sup>2</sup> = .020 ***	R <sup>2</sup> = .063	$\Delta$ R <sup>2</sup> = .063 ***
<b>Pre-college Socialization</b>						
Parental Influence	.028	.025	-.035	-.029	.055	.041
White pre-college environment	-.019	-.018	-.024	-.022	-.082	-.065 *
Pre-college frequency of interactions	-.019	-.029	.018	.026	-.021	-.028
Pre-college experience of discrimination	.022	.046	.027	.053	.007	.012
Predisposition to participate in diversity related experiences	.072	.069	-.016	-.014	-.024	-.019
	R <sup>2</sup> = .234	$\Delta$ R <sup>2</sup> = .138 ***	R <sup>2</sup> = .064	$\Delta$ R <sup>2</sup> = .044 ***	R <sup>2</sup> = .083	$\Delta$ R <sup>2</sup> = .020 ***
<b>Pretest Measures</b>						
Racial identity development (Time 1)	.348	.348 ***	.313	.300 ***	.281	.263 ***
	R <sup>2</sup> = .322	$\Delta$ R <sup>2</sup> = .088 ***	R <sup>2</sup> = .163	$\Delta$ R <sup>2</sup> = .099 ***	R <sup>2</sup> = .181	$\Delta$ R <sup>2</sup> = .098 ***
<b>Institutional Characteristics and Climate</b>						
Low Structural Diversity (High)	.006	.014	.026	.052	.029	.051
Moderate Structural Diversity (High)	-.014	-.030	.063	.125	.129	.228 ***
Negative climate for diversity	.040	.043	.062	.062	-.096	-.087 **
Sense of belonging	.089	.080 **	.033	.028	.035	.026
	R <sup>2</sup> = .334	$\Delta$ R <sup>2</sup> = .012 ***	R <sup>2</sup> = .178	$\Delta$ R <sup>2</sup> = .015 ***	R <sup>2</sup> = .196	$\Delta$ R <sup>2</sup> = .015 ***
<b>College Interactions with Diverse and Same Race Peers</b>						
Positive quality of interactions	.029	.028	.004	.004	.044	.035
Negative quality of interactions	.055	.055	.119	.112 **	.049	.041
Frequency of interactions	.005	.008	-.042	-.068	-.099	-.144 **
Same race interactions	.022	.027	.018	.020	.225	.229 ***
	R <sup>2</sup> = .340	$\Delta$ R <sup>2</sup> = .006 ***	R <sup>2</sup> = .189	$\Delta$ R <sup>2</sup> = .011 ***	R <sup>2</sup> = .245	$\Delta$ R <sup>2</sup> = .049 ***
<b>Co-Curricular Experiences</b>						
Participation in diversity co-curricular activities	.146	.135 ***	.098	.085 **	.022	.017
Participated in cultural organizations	.139	.246 ***	.082	.135 *	.025	.037
Lived on-campus	-.033	-.068	-.002	-.005	-.011	-.020
	R <sup>2</sup> = .377	$\Delta$ R <sup>2</sup> = .037 ***	R <sup>2</sup> = .200	$\Delta$ R <sup>2</sup> = .011 ***	R <sup>2</sup> = .243	$\Delta$ R <sup>2</sup> = -.002 ***
<b>Curricular Experiences</b>						
Courses with diversity readings and materials	.084	.079 *	.196	.171 ***	-.047	-.036
Courses with intensive dialogue	-.021	-.016	-.005	-.004	.042	.026
Courses with service-learning	-.022	-.025	-.100	-.105 **	.026	.024
	R <sup>2</sup> = .378	$\Delta$ R <sup>2</sup> = .001 ***	R <sup>2</sup> = .230	$\Delta$ R <sup>2</sup> = .030 ***	R <sup>2</sup> = .242	$\Delta$ R <sup>2</sup> = -.001 ***

\*p<.05; \*\*p<.01; \*\*\*p<.001

$\beta$ =standardized regression weight; b=unstandardized regression weight for comparison across groups

R<sup>2</sup>=Cumulative Adjusted R<sup>2</sup>;  $\Delta$ R<sup>2</sup>=Change in Adjusted R<sup>2</sup>

a greater sense of common fate than second or third generation APA students. These independent variables explain 37.8% of the variance in APA students' common fate.

In addition to the pretest measure of race centrality ( $\beta = .313, p < .001$ ), experiencing negative quality of interactions ( $\beta = .119, p < .01$ ), participating in diversity co-curricular activities ( $\beta = .098, p < .05$ ), participating in cultural organizations ( $\beta = .082, p < .05$ ) and taking a course with readings and materials on diversity ( $\beta = .196, p < .001$ ) have a significant positive effect on Asian Pacific American students' race centrality. With an increase in variance of 3.0%, students' enrollment in courses with reading and materials on diversity and courses with service-learning make the largest contribution to students' race centrality outside of the variables measuring pre-college socialization and the pretest measure for race centrality. APA students who participate in courses with service-learning ( $\beta = -.100, p < .01$ ) have a lower race centrality than APA students who do not participate in such courses.

Four independent variables have been found to detract from APA students' shared racial/ethnic values with other Asian Pacific Americans. These variables include high school academic performance ( $\beta = -.113, p < .01$ ), generation status ( $\beta = -.094, p < .01$ ), White pre-college environment ( $\beta = -.082, p < .05$ ), negative climate for diversity ( $\beta = -.096, p < .01$ ), and frequency of interactions ( $\beta = -.099, p < .01$ ). Those variables which contribute to APA students' shared racial/ethnic values include the pretest measure of shared racial/ethnic values ( $\beta = .281, p < .001$ ), moderate structural diversity ( $\beta = .129, p < .001$ ), and same race interactions ( $\beta = .225, p < .001$ ).

### *Latino Students*

As outlined in Table 4.15 (see table below), Latino students' sense of common fate is positively affected by parental influence ( $\beta = .114, p < .01$ ), negative quality of interactions ( $\beta = .120, p < .05$ ), same race interactions ( $\beta = .123, p < .05$ ), participation in diversity co-curricular activities ( $\beta = .171, p < .05$ ) and enrolling in courses with diversity readings and materials ( $\beta = .118, p < .05$ ). Similar to White and APA students, Latino students' sense of common fate is negatively influenced by generation status ( $\beta = -.123, p < .01$ ). Based on these findings, students who have the influence of parents, as well as those who have negative quality of interactions, same race interactions, and co-curricular experiences during college, share a greater sense of common fate with their Latino peers.

All blocks of college measures significantly contribute to Latino students' race centrality with the largest college contribution of 2.3% being made by students' curricular experiences. Latino students who live on-campus ( $\beta = -.137, p < .01$ ) and participate in intensive dialogues ( $\beta = -.130, p < .01$ ) are less likely to think about their race than students who live off-campus and do not participate in courses with intensive dialogues. On the other hand, Latino students who have perceptions of a negative campus climate ( $\beta = .094, p < .05$ ), have negative interactions ( $\beta = .103, p < .05$ ), participate in cultural organizations ( $\beta = .126, p < .05$ ), and enroll in courses with readings and materials on diversity ( $\beta = .163, p < .01$ ) tend to think more about their race than Latino students who do not have these experiences. Overall, the model explains 34.4% of the variance in Latino students' race centrality.

There were six significant independent variables for the regression model measuring shared racial/ethnic values. Four of these measures had a positive influence

**Table 4.15 Results of Blocked Hierarchical Regressions for Racial Identity Development Outcomes—Latino (n = 378)**

Variable	Sense of Common Fate		Race Centrality		Shared Racial/Ethnic Values	
	$\beta$	b	$\beta$	b	$\beta$	b
<b>Student Background Characteristics</b>						
Gender (Female)	.066	.120	.043	.078	.044	.069
Composite SAT Score	-.029	-1.60E-04	.039	2.10E-04	-.031	-1.44E-04
High School (Graduate School)	-.052	-.139	.041	.107	-.060	-.138
College (Graduate School)	-.016	-.029	-.001	-.002	-.031	-.047
Generation status in the U.S.	-.123	-.087**	-.083	-.058	.000	.000
	R <sup>2</sup> = .084	$\Delta$ R <sup>2</sup> = .084***	R <sup>2</sup> = .046	$\Delta$ R <sup>2</sup> = .046***	R <sup>2</sup> = .060	$\Delta$ R <sup>2</sup> = .060***
<b>Pre-college Socialization</b>						
Parental Influence	.114	.099**	.015	.013	.085	.063*
White pre-college environment	-.080	-.078	-.057	-.054	-.029	-.024
Pre-college frequency of interactions	.014	.024	-.067	-.114	-.032	-.046
Pre-college experience of discrimination	.029	.064	.027	.059	-.059	-.111
Predisposition to participate in diversity related experiences	.093	.094	.074	.073	.085	.073
	R <sup>2</sup> = .197	$\Delta$ R <sup>2</sup> = .113***	R <sup>2</sup> = .135	$\Delta$ R <sup>2</sup> = .089***	R <sup>2</sup> = .084	$\Delta$ R <sup>2</sup> = .024***
<b>Prestest Measures</b>						
Racial identity development (Time 1)	.311	.325***	.362	.353***	.412	.381***
	R <sup>2</sup> = .279	$\Delta$ R <sup>2</sup> = .082***	R <sup>2</sup> = .277	$\Delta$ R <sup>2</sup> = .142***	R <sup>2</sup> = .309	$\Delta$ R <sup>2</sup> = .225***
<b>Institutional Characteristics and Climate</b>						
Low Structural Diversity (High)	-.016	-.043	.018	.047	.025	.056
Moderate Structural Diversity (High)	.045	.099	.029	.064	.033	.062
Negative climate for diversity	-.029	-.033	.094	.105*	.070	.068
Sense of belonging	-.023	-.022	.023	.021	.007	.006
	R <sup>2</sup> = .279	$\Delta$ R <sup>2</sup> = .000***	R <sup>2</sup> = .291	$\Delta$ R <sup>2</sup> = .014***	R <sup>2</sup> = .304	$\Delta$ R <sup>2</sup> = .005***
<b>College Interactions with Diverse and Same Race Peers</b>						
Positive quality of interactions	-.036	-.036	.051	.050	.016	.013
Negative quality of interactions	.120	.126*	.103	.107*	-.100	-.090*
Frequency of interactions	.017	.032	-.019	-.035	-.037	-.060
Same race interactions	.123	.138*	.035	.039	.246	.236***
	R <sup>2</sup> = .306	$\Delta$ R <sup>2</sup> = .027***	R <sup>2</sup> = .301	$\Delta$ R <sup>2</sup> = .010***	R <sup>2</sup> = .352	$\Delta$ R <sup>2</sup> = .048***
<b>Co-Curricular Experiences</b>						
Participation in diversity co-curricular activities	.171	.169**	-.029	-.029	.008	.006
Participated in cultural organizations	-.024	-.051	.126	.258**	-.006	-.011
Lived on-campus	-.001	-.002	-.137	-.283**	-.111	-.199*
	R <sup>2</sup> = .321	$\Delta$ R <sup>2</sup> = .015***	R <sup>2</sup> = .321	$\Delta$ R <sup>2</sup> = .020***	R <sup>2</sup> = .356	$\Delta$ R <sup>2</sup> = .004***
<b>Curricular Experiences</b>						
Courses with diversity readings and materials	.118	.115*	.163	.156**	.109	.090*
Courses with intensive dialogue	-.091	-.074	-.130	-.103**	-.070	-.048
Courses with service-learning	.014	.015	.080	.085	.033	.031
	R <sup>2</sup> = .327	$\Delta$ R <sup>2</sup> = .006***	R <sup>2</sup> = .344	$\Delta$ R <sup>2</sup> = .023***	R <sup>2</sup> = .361	$\Delta$ R <sup>2</sup> = .005***

\*p<.05; \*\*p<.01; \*\*\*p<.001

$\beta$ =standardized regression weight; b=unstandardized regression weight for comparison across groups  
R<sup>2</sup>=Cumulative Adjusted R<sup>2</sup>;  $\Delta$  R<sup>2</sup>=Change in Adjusted R<sup>2</sup>

on shared racial/ethnic values: the pretest measure of shared racial/ethnic values ( $\beta = .412, p < .001$ ), parental influence ( $\beta = .085, p < .05$ ), same race interactions ( $\beta = .246, p < .001$ ), and enrolling in courses with readings and materials on diversity ( $\beta = .109, p < .05$ ). Negative quality of interactions ( $\beta = -.100, p < .05$ ) and living on-campus ( $\beta = -.111, p < .05$ ) are the only significant independent variable which causes a decline in shared racial/ethnic values. The remaining independent variables were not significant for this racial/ethnic identity development outcome. The model explains 36.1% of the change in Latino students' shared racial/ethnic values.

#### *African American Students*

Students from an African America background report the greatest change for two measures of racial/ethnic identity development, including race centrality and racial/ethnic values. The fact that these measures at Time 1 (college entry) contribute significantly to student growth suggests that African American students enter college with a relatively advanced level of racial/ethnic identity. It also suggests that some aspect of their background or socialization prepares them to effectively manage a myriad of college experiences. Being the sole minority (or one of a few minorities) in the dominant pre-college environment may increase the salience of their ethnic group membership (Landrine & Klonoff, 1996).

Table 4.16 (see table below) outlines the results for the three hierarchical multiple regressions conducted for students in the African American group. In addition to the pretest measure of common fate ( $\beta = .205, p < .001$ ), students' participation in diversity co-curricular activities ( $\beta = .184, p < .05$ ) is the only significant predictor of African American students' feeling of common fate. Students' who participate in such activities

**Table 4.16 Results of Blocked Hierarchical Regressions for Racial Identity Development Outcomes—African American (n = 223)**

Variable	Sense of Common Fate			Race Centrality			Shared Racial/Ethnic Values		
	$\beta$	b	$R^2$	$\beta$	b	$R^2$	$\beta$	b	$R^2$
<b>Student Background Characteristics</b>									
Gender (Female)	.047	.069		.232	.334***		-.016	-.027	
Composite SAT Score	-.014	-7.09E-05		.022	1.09E-04		-.077	-4.43E-04	
High School (Graduate School)	-.061	-.227		-.056	-.204		.065	.271	
College (Graduate School)	.080	.115		.055	.077		.033	.052	
Generation status in the U.S.	-.072	-.041		.044	.024		.022	.014	
	$R^2 = .012$	$\Delta R^2 = .012$		$R^2 = .043$	$\Delta R^2 = .043^{**}$		$R^2 = .047$	$\Delta R^2 = .047^{**}$	
<b>Pre-college Socialization</b>									
Parental Influence	-.080	-.055		-.059	-.040		-.007	-.006	
White pre-college environment	-.058	-.045		-.139	-.106*		.068	.059	
Pre-college frequency of interactions	-.027	-.036		.070	.090		.017	.025	
Pre-college experience of discrimination	-.006	-.010		-.108	-.168		.067	.119	
Predisposition to participate in diversity related experiences	-.024	-.022		.083	.073		-.020	-.020	
	$R^2 = .021$	$\Delta R^2 = .033$		$R^2 = .099$	$\Delta R^2 = .056^{***}$		$R^2 = .088$	$\Delta R^2 = .041^{***}$	
<b>Pretest Measures</b>									
Racial identity development (Time 1)	.205	.192**		.217	.195***		.481	.444***	
	$R^2 = .052$	$\Delta R^2 = .031^*$		$R^2 = .153$	$\Delta R^2 = .054^{***}$		$R^2 = .309$	$\Delta R^2 = .221^{***}$	
<b>Institutional Characteristics and Climate</b>									
Low Structural Diversity (High)	.088	.152		.198	.332**		-.032	-.061	
Moderate Structural Diversity (High)	.011	.017		.073	.115		-.052	-.094	
Negative climate for diversity	.102	.089		.084	.072		-.089	-.087	
Sense of belonging	.117	.088		.018	.013		.106	.088	
	$R^2 = .113$	$\Delta R^2 = .061^{***}$		$R^2 = .199$	$\Delta R^2 = .046^{***}$		$R^2 = .313$	$\Delta R^2 = .004^{***}$	
<b>College Interactions with Diverse and Same Race Peers</b>									
Positive quality of interactions	-.032	-.026		.009	.007		-.105	-.094	
Negative quality of interactions	.084	.072		.105	.088		.114	.109	
Frequency of interactions	-.009	-.015		-.105	-.162		.011	.020	
Same race interactions	-.091	-.081		.028	.024		.275	.273***	
	$R^2 = .104$	$\Delta R^2 = .009^{***}$		$R^2 = .200$	$\Delta R^2 = .001^{***}$		$R^2 = .383$	$\Delta R^2 = .070^{***}$	
<b>Co-Curricular Experiences</b>									
Participation in diversity co-curricular activities	.184	.149*		.137	.108		.097	.087	
Participated in cultural organizations	.056	.079		-.062	-.086		-.075	-.118	
Lived on-campus	.077	.150		-.020	-.037		-.033	-.070	
	$R^2 = .142$	$\Delta R^2 = .038^{***}$		$R^2 = .201$	$\Delta R^2 = .001^{***}$		$R^2 = .387$	$\Delta R^2 = .004^{***}$	
<b>Curricular Experiences</b>									
Courses with diversity readings and materials	.144	.115		-.015	-.011		-.017	-.015	
Courses with intensive dialogue	.034	.023		.004	.003		.072	.054	
Courses with service-learning	.089	.081		-.045	-.040		.091	.092	
	$R^2 = .161$	$\Delta R^2 = .019^{***}$		$R^2 = .191$	$\Delta R^2 = .010^{***}$		$R^2 = .389$	$\Delta R^2 = .002^{***}$	

\*p<.05; \*\*p<.01; \*\*\*p<.001

$\beta$ =standardized regression weight; b=unstandardized regression weight for comparison across groups

$R^2$ =Cumulative Adjusted  $R^2$ ;  $\Delta R^2$ =Change in Adjusted  $R^2$



share a greater sense of common fate with other African Americans. Overall, the regression model explained 16.1% of the variance in African American students' common fate.

Variables that were nonsignificant across all racial/ethnic identity development models for African Americans include: academic performance, socioeconomic status, generation status in the U.S., parental influence, pre-college interactions with diverse peers, pre-college experience of discrimination, predisposition to participate in diversity related experiences, moderate structural diversity, negative climate for diversity, sense of belonging, quality of interactions, frequency of interactions with diverse others, participation in cultural organizations, on-campus housing, courses with diversity readings and materials, courses with intensive dialogue, and courses with service-learning.

The regression model accounted for 19.1% of the variance in African American students' race centrality. The pretest measure of African American race centrality ( $\beta = .217, p < .001$ ) was significant. African American females ( $\beta = .232, p < .001$ ) were significantly different from their male counterparts in how often they thought about their race. The only other significant pre-college measure was living in a White pre-college environment ( $\beta = -.139, p < .05$ ), which causes students to think less about their race. Similar to African American female students, African American students who attended institutions with low structural diversity ( $\beta = .198, p < .01$ ) thought about their race often. Similar to sense of common fate, the college measures accounting for the greatest amount of variance in race centrality, specifically 4.6%, was the institutions' characteristics and climate.

The regression model for the final measure of racial/ethnic identity development, shared racial/ethnic values, explained 38.9% of the variance in this measure. Outside of the pretest measure of shared racial/ethnic values ( $\beta = .481, p < .001$ ), same race interactions ( $\beta = .275, p < .001$ ) made the only significant contribution. As mentioned above, variables representing the other five blocks of variables were not significant.

### **Summary of the Study Findings**

The goals of this study were as follows: (1) to determine institutional characteristics and student experiences that affect racial/ethnic identity development; (2) to highlight the differences in the racial/ethnic identity development of White, African American, Asian Pacific American and Latino students; and (3) to examine the impact of interactions with diverse peers on racial/ethnic identity development of various racial/ethnic groups. With a focus on diversity-related college experiences, this study highlights the nuances in the racial/ethnic identity development of White, Asian Pacific American, Latino, and African American students. It not only substantiates the differential impact of diversity-related college experiences on racial/ethnic identity development but also serves as a basis for continued research in the area. Chapter 5 summarizes the findings of this study while revisiting the identity development and racial/ethnic identity development theories previously reviewed. Recommendations for faculty and administrators and future research are presented at the close of this chapter.

## CHAPTER 5

### DISCUSSION AND IMPLICATIONS

#### *Differences in Students' Racial/ethnic Identity Development*

Overall, the findings support the use of a conceptual framework that incorporates diversity-related college experiences in the study of racial/ethnic identity development. As a result of such experiences, the four racial/ethnic groups included in this study demonstrate a significant change in racial/ethnic identity during the first two years of college. The changes for each individual racial group are explained in greater detail below.

Asian Pacific American students in this study scored lower on two ethnic identity measures (i.e., sense of common fate and shared values and beliefs) at the end of their second year of college as compared to their ethnic identity at beginning of their first year. Previous studies of Asian American racial/ethnic identity utilized theories of assimilation to explain the decline. These theories suggest that weakening ethnic identity may be a sign of integration into the host society. Some researchers (Sears, Fu, Henry, & Bui, 2003) have offered that gradual assimilation may cause ethnic identity to be supplanted (or at least supplemented) by other forms of identity. According to Lee (2003), a decrease in identity may represent another-group orientation that may be used by Asian Pacific American students as a form of protection against the negative effects of discrimination. Such an orientation may also serve to keep APA students actively engaged with the White majority group, as well as enable them to marshal resources from

other ethnic groups who may be in a similar predicament. The results for White students were similar to those for Asian Pacific American students. These students also decreased in their sense of common fate and shared racial/ethnic values. While assimilation has been used to explain the decrease in APA students' racial/ethnic identity, other theories have been offered for White students' decrease in racial/ethnic identity. It has been posited that when faced with a diverse environment, White students choose to utilize interactions with diverse peers in their search for a shared identity that may help to diminish or thwart possible racial/ethnic conflicts (Saylor & Aries, 1999). Given the timing of the second-year survey administration for this study (i.e., post 9/11), White students' decrease in racial/ethnic identity may also be attributable to their desire to maintain a strong national identity. In the wake of the terrorist attacks, these students may have chosen to emphasize their commitments to basic Western cultural beliefs and values (e.g., civil rights and democracy) (Dunkel, 2002) instead of focusing on their racial/ethnic group. Contrary to other group findings, White students appear receptive to various forms of interaction with diverse peers, as well as co-curricular and curricular experiences. It may stand to reason that, as members of the majority group, these students would benefit the most from a diverse college environment.

Previous research findings indicate that African American students demonstrate significant racial/ethnic identity development during college. This study substantiates the relevance of the college context to African American student development. Similar to previous studies involving multiple racial/ethnic groups, African American students in this study show a greater change in race centrality and shared racial/ethnic values than do other racial/ethnic groups; however, they do show a slight decrease in their sense of

common fate. African American racial/ethnic identity development was found to be largely influenced by the institutional characteristics and climate.

Latino students' racial/ethnic identity development is less pronounced during the first two years of college than that of their African American counterparts. These students, much like African American students, are affected by their college experiences however to a lesser degree. They report an increase in all measures of racial/ethnic identity except their sense of common fate which decreased during the first two years of college. As the only student group reporting changes due to enrolling in courses involving intensive dialogue, Latino students produced interesting results with regard to their co-curricular and curricular experiences. Enrolling in courses with intensive dialogue caused a decrease in students' race centrality. The overall findings for the Latino group suggest that one of the greatest influences was their pre-college socialization, specifically the level of parental influence and predisposition to participate in diversity related experiences.

#### *Students' Background Characteristics and Pre-college Socialization*

Generally, findings suggest that females possess a higher sense of common fate; however, there was no statistical difference in race centrality and shared racial/ethnic values for male and female students. The White student group replicated these findings while African American females differed from African American males only in their race centrality, with females scoring higher in both cases. Consistent with findings from Phinney and Tarver (1988), this study found a higher trend toward racial/ethnic identity development (i.e., race centrality) for African American females compared to males. This study revealed no significant difference in the racial/ethnic identity development of

Latino male and female students. Future research should focus attention on understanding the developmental differences between male and female students.

Generation status in the U.S. was the only other measure of students' background characteristics that was significant in this study. This measure had a significant impact on the sense of common fate and shared racial/ethnic values of White and APA students, as well as the sense of common fate of Latino students. White students' sense of common fate decreased while their shared racial/ethnic values increased, due to their generation status. The generation status of APA students decreased both their sense of common fate and shared racial/ethnic values while Latino students' experienced a decrease only in their sense of common fate. For students in this study, particularly those identifying as APA and Latino, the length of time in the U.S. may lead them to shed the marks of their ethnic group membership (Tajfel & Turner, 1979); thereby negatively impacting their racial/ethnic identity development.

The concept of parental influence has been included in numerous studies of racial/ethnic identity. This variable proved relevant to the racial/ethnic identity development of White and Latino students. Parental influence positively influenced the race centrality of White students and the sense of common fate and racial/ethnic values of Latino students. The importance of parental influence to Latino racial/ethnic identity has been described by Rodriguez (2000) as *familismo*, a strong sense of family centrality and importance. Latinos traditionally adhere to *familismo* because family is viewed as a primary means of social support. The pervasiveness of *familismo* is manifested by: (a) providing material and emotional support to other family members, (b) relying primarily on family members for help and support, (c) using family members as referents for

attitudes and behaviors, and (d) placing the needs of the family or family members before individual needs.

Research has found that measures of Black racial/ethnic identity (i.e., feelings of closeness and black group evaluation) are enhanced by parental socialization and positive interpersonal relations with family and friends (Demo & Hughes, 1990). Contrary to former findings, this study revealed no significant relationship between measures of pre-college socialization and the racial/ethnic identity development of African American students. It may be that these measures failed to adequately capture the socialization experiences of African American and APA students. Another plausible explanation is that entering a diverse college environment represents a critical turning point when pre-college experiences, such as parental influences and involvement, have begun to attenuate and are gradually being replaced by experiences involving ethnically similar classmates, ethnic-specific organizations, and academic coursework that stimulates ethnic identity (Uba, 1994). These findings warrant further investigation to gain a better understanding of socialization experiences that influence the racial/ethnic identity development of African American and APA students.

According to Demo and Hughes (1990), the socio-racial forces of a White environment have the potential to constrain individual self-expression for persons of certain racial/ethnic groups and to falsely inflate feelings of self-worth in others. This constraint is evidenced by the decrease in APA students' shared racial/ethnic values and African American students' race centrality. Although a White pre-college environment is expected to strengthen racial/ethnic identity and inspire self-pride among White students, the findings of this study provide mixed results. White students' race centrality actually

decreases while their shared racial/ethnic values increase. Being in a predominantly White pre-college environment may discourage White students from thinking about their race or reflecting on the impact of race in their day-to-day lives.

Contrary to other studies which measure experience of discrimination (e.g., Verkuyten, 1995), pre-college experience of discrimination was not predictive of racial/ethnic identity development of minority students in the present study. White students, however, reported a decrease in shared racial/ethnic values due to their pre-college experience of discrimination. This interesting finding suggests that the strength of the association between discrimination and racial/ethnic identity may vary with the source of discrimination (Pahl & Way, 2006). The source of the discrimination reported by White students in this study may be within group and therefore, based more on students' ethnicity than race. The majority of White students reported growing up in a predominantly White environment which may result in more emphasis being placed on ethnic group differences (e.g., European-American, Polish, Italian, Irish, Jewish, etc.). Further research is warranted in this area to clarify the impact of discrimination on racial/ethnic identity development.

Only White students with a predisposition to participate in diversity related activities showed a significant difference in all measures of racial/ethnic identity. This independent variable caused White students to increase in their sense of common fate and race centrality but decrease in their sense of racial/ethnic values. APA students reported an increase in their sense of common fate due to their predisposition to participate in diversity related experiences. It has been suggested that the predisposition to participate in diversity related activities opens students to the opportunity to engage in experiences



and knowledge that may expose them to diverse others, similar and different from themselves, which may ultimately result in a better understanding of their own racial/ethnic identity. White students were the only group to show a significant change in racial/ethnic identity, specifically shared sense of common fate, due to pre-college interactions with diverse peers. These students tended to decrease in their sense of common fate when they engaged in pre-college interactions with diverse peers.

#### *Institutional Characteristics and Climate*

In this study, institutional characteristics and climate prove relevant to the racial/ethnic identity development of college students identifying as African American, Asian Pacific American, and White. This study examined the influence of four measures of the institutional characteristics and climate, including low structural diversity, moderate structural diversity, negative climate for diversity, and sense of belonging. Findings support Inkelas' (2004) conclusion that students' perceptions about their campuses may be just as influential as their experiences.

Structural diversity appears relevant to the identity development of the APA and African American college students in this study. Asian Pacific American students who attend institutions with moderate structural diversity tend to have shared racial/ethnic values. African American students tend to think more about their race when attending institutions characterized by low structural diversity. Interestingly enough, such institutions may present African American students with the dilemma of being called upon to "represent the race", leading to an increase in race centrality. The dilemma often centers around whether to be a token and serve as the "spokesperson for Black people" or assimilate with the majority. Unfortunately, the increase in race centrality of students

attending institutions characterized by low structural diversity is likely attached to experiences of tokenism. Beyond the composition of the student body, other factors relating to institutional climate (that institutions can reasonably shape) affect student's racial/ethnic identity development. These factors include a negative climate for diversity and students' sense of belonging.

Institutions with a negative climate for diversity significantly impact students to varying degrees. For White students, this independent variable positively affects their sense of common fate and race centrality but negatively affects their shared racial/ethnic values. Likewise, Latino students experience an increase in their race centrality while APA students experience a decline in shared racial/ethnic values due to a negative climate for diversity. As members of the largest student groups, White and APA students may seek to avoid conflict associated with a negative campus climate by deemphasizing their racial/ethnic values. This negative relationship also suggests that these students may attribute the campus climate to their presence as students with White and Asian American backgrounds. Another measure of institutional climate, having a sense of belonging to the institution, is also relevant to racial/ethnic identity development, specifically the increase in White and APA students' sense of common fate and White students' shared racial/ethnic values. For these students, racial/ethnic identity is bolstered by feelings of being a valued member of the university community and faculty having a sincere interest in their development.

Based on the findings of this study, African American students appear to be most affected by the characteristics and climate of their institutions. For African American students from a predominantly homogenous pre-college environment, entering college

may represent an encounter or crisis. Given their level of racial/ethnic identity development at college entry, these students may be more sensitive to the college structure and climate than other students.

In improving the college environment, it is important to understand how the culture of institutions is “structured in terms of historical and collective memories, as well as in terms of racialized places and interaction” (Feagin, Vera, & Imani, 1996, p. 84). Both campus culture and climate influence the development of students’ racial, ethnic, and multiple identities. According to Torres (1999), if students of color perceive that their race is not valued, their struggle to define themselves racially can be further heightened by inhospitable campus environments. Realizing that more students are entering college from a homogenous environment (Gurin, Dey, Hurtado & Gurin, 2002), it is important for college and universities to give greater attention to creating multicultural environments that are not only structurally diverse but also inviting and inclusive of the diverse racial/ethnic identities on campus. Institutions must work to establish clearly defined policies, procedures, and practices that empower every student to develop a secure racial/ethnic identity while maintaining a healthy regard for the identity of others.

#### *Interaction with Diverse Peers*

*Quality of interactions.* For White students, interactions of a positive quality, as well as interactions of a negative quality, result in a stronger sense of common fate. Interactions of a negative quality also cause White, Asian, and Latino students to think more about their race. Furthermore, this measure increases Latino students’ sense of common fate. The positive relationship between certain measures of racial/ethnic

identity and interactions of a negative quality suggests that White, Asian, and Latino students are able to resolve the conflict associated with negative interactions so as to learn and grow from these experiences.

While this study does not speak to student's predilection for conflict resolution or the nature of the negative interactions, it does substantiate the view of ethnic and racial identity theorists that critical incidents (i.e., interactions of a negative quality) are relevant to the process of racial/ethnic identity. Without such incidents, students may not progress to higher levels of racial/ethnic identity development. According to Cross (1995), negative interactions with members of other ethnic groups (i.e., an encounter) are more likely to push one toward exploring the meaning of being a member of one's ethnic group. Numerous studies (Atkinson et al., 1998; Cross, 1995) have shown that minorities draw on these negative ethnic and racial experiences to develop more complex and integrated identities.

*Frequency of interactions.* As a whole, students report no significant change in racial/ethnic identity development as a result of frequent interactions with diverse peers. For White students, such contact during adolescence—when youth are striving to attain a sense of who they are and what they stand for—has a negative impact on their racial/ethnic identity, namely their sense of common fate. APA students are the only other student group which reported a change in racial/ethnic identity development as a result of frequent interactions with diverse peers, specifically a decrease in their shared racial/ethnic values. Interactions with diverse peers, particularly those identifying as White, may cause APA students to reevaluate values believed to be relevant to members of their racial/ethnic group.

The racial/ethnic identity of the White, Latino, and African American students in this study was neither heightened nor diminished by their frequency of interactions with diverse peers, despite previous studies (Demo & Hughes, 1990) suggesting that interaction with diverse peers weakens racial/ethnic identity development, particularly for Black students. Studies also suggest that interaction with diverse peers during college causes students to abandon their own racial/ethnic identity development in search of a common sense of belonging and shared identity with other college students. While this study substantiates the negative influence of interactions with diverse peers during college, particularly for APA students, it cannot conclusively support the finding that students readily abandon their own racial/ethnic identity development in search of a common shared identity. Future research should be conducted to examine the tenuous relationship between interaction with diverse peers, racial/ethnic identity development and the formation of common shared identity among college students.

*Same race interactions.* As for same race interactions, all of the racial/ethnic groups included in this study appear to benefit significantly from such interactions with an increase in their shared racial/ethnic values. Based on this finding it could be argued that interactions with others from the same racial/ethnic background provide students with opportunities to practice and reinforce values thought common to members of their racial/ethnic groups. Interesting to note, the White students included in this study also experienced a decline in their sense of common fate as a result of same race interactions. While same race interactions potentially serve as a resource for minority student groups, these types of interactions may prove constraining for those in the majority. These findings suggest that White students' sense of common fate is based on ethnic

distinctions which go unnoticed until same race interactions occur. Once these ethnic differences are realized, White students decrease in their sense of common fate. Given the complexity of students' social needs as they relate to racial/ethnic identity development, increased attention must be paid to the creation of diverse college environments that provide opportunities for meaningful and sustained interactions with diverse and same race peers.

### *Co-curricular Experiences*

Participation in diversity co-curricular activities increases the sense of common fate for all racial/ethnic groups and the race centrality of White, Asian, and African American students. White and APA students who participate in cultural organizations report a stronger sense of common fate and race centrality. Latino students only report a positive change in race centrality as a result of participation in cultural organizations. Engagement in diversity co-curricular activities may provide the informal yet supportive environment needed to bolster racial/ethnic identity. Students who participate in these activities may feel comfortable addressing issues of race/ethnicity openly and honestly.

Living on-campus proved relevant only to the racial/ethnic identity development of Latino students. As a result of living on-campus, Latino students reported a decrease in race centrality and shared racial/ethnic values. It may stand to reason that living on-campus isolates Latino students from like others and limits the opportunity to engage in familial interactions. Living in an environment where they are in close proximity to White students, Latinos may feel the need to minimize their race/ethnicity by assimilating.

With the greatest variance in common fate and race centrality, Asian Pacific American students appear to benefit the most from co-curricular experiences, namely diversity co-curricular activities and cultural organizations. Kiang's (1996) study found that ethnic student organizations were useful in promoting a stronger sense of common identity among Asian Pacific American students. According to Kiang, participation in ethnic clubs and other diversity-related activities were significantly related to awareness and understanding of Asian American issues and interests.

Most scholars who study the impact of college on students agree that what happens outside the classroom—the other curriculum—can contribute to valued outcomes of college (Kuh, 1995). For example, participation in extracurricular activities, living in a campus residence, and conversations with faculty and peers have been positively related to persistence and satisfaction and gains in such areas as social competence, autonomy, confidence, self-awareness, and appreciation for human diversity. Students benefit from the opportunity to participate in ethnically oriented programs that promote interactions with ethnic peers, as well as possible exposure to peers of other races. While students have a variety of reasons for seeking membership in campus groups, the most popular reason is for the psychological benefits of *belonging* which has been shown to serve as a powerful force for academic survival on University campuses. As campuses grow more diverse it is important to have activities, organizations, and clubs that allow for same race, as well as, cross race interactions. These activities allow for a college environment that is both supportive and encouraging while exposing students to other cultures.

Student participation in co-curricular activities warrants further attention to better understand the characteristics of co-curricular activities that contribute to student development. This study utilized a composite measure of participation in diversity co-curricular activities; however, it may prove beneficial to examine each item comprising diversity co-curricular activities (i.e., events sponsored by groups reflecting your own cultural heritage, campus organized discussions on racial/ethnic issues, and diversity awareness workshops) independently to more accurately measure the contribution to racial/ethnic identity development.

### *Curricular Experiences*

While co-curricular experiences significantly impact all students' sense of common fate and race centrality, participation in curricular experiences only influences the race centrality of White and Latino students. Two reasons may serve to explicate this finding: 1) Sense of common fate and race centrality may represent measures of racial/ethnic identity development that require the relationship building and bonding fostered through co-curricular activities; and 2) It may be that while curricular experiences cause students to think more about their race, they fail to encourage the additional self-exploration needed to increase their sense of common fate and shared racial/ethnic values.

*Curricular activities.* White, APA, and Latino students enrolled in courses with diversity readings and materials tend to think more about their race than White, APA, and Latino students not enrolled in such courses. APA and Latino students also report a significant change in sense of common fate due to enrolling in such courses. Latino students also report a modest change in shared racial/ethnic values as a result of enrolling



in courses with diversity readings and materials. Unlike other racial groups, African American students show no change in racial identity as a result of enrolling in courses with diversity reading and materials. This lack of significance for African American students may represent their need to have the experiences of their communities not only represented in supplemental course materials but also viewed as an integral part of higher education curriculum. According to Tatum (2004), academic excellence should be incorporated into the definition of what it means to be Black. Stereotypical expectations of academic ability, as well as curricula that fails to provide accurate and adequate representation for all student groups, may prove detrimental to racial/ethnic identity development, particularly for those students from African American backgrounds.

Carter and Goodwin (1994) support the use of racial/ethnic identity development as a conceptual framework that undergirds the creation and implementation of curricula. While their research focused on schoolage children, it is reasonable to conclude that college students also stand to benefit from curriculum transformed to enhance the development of positive racial/ethnic identity. Developing a strong identity has the potential to alter the perceptions various racial/ethnic group members have of themselves and in turn, can modify the manner in which students approach college and interactions with others.

According to Ortiz and Rhoads (2000), multicultural education is relevant to increasing awareness and understanding of the racial/ethnic identity development of both non-white and White students. Their framework for multicultural education (Ortiz & Rhoads, 2000) is a five-step nonlinear process that includes: (1) understanding culture—the person attempts to gain a deeper understanding of culture and how it shapes all of our

lives, (2) learning about other cultures—the need to learn and explore diverse cultures at a deeper level, (3) recognizing and deconstructing white culture—the attempt to understand the nature of white privilege and to challenge what has been considered the norm, (4) recognizing the legitimacy of other cultures—the recognition that all cultures make a significant contribution to society, and (5) developing a multicultural outlook—reconstruction of the systems operating in the United States if society is to embrace all cultures. This process can be used as an educational intervention or curriculum development guide.

*Intensive dialogue.* Intensive dialogue proved relevant only to the change in the racial/ethnic identity of Latino students. Engaging in intensive dialogue causes Latino students to think less about their race than Latino students who do not participate in such dialogue. The conditions used to guide courses and programs involving intensive dialogue, such as equal status, community sanction, and a common goal, are intended to promote positive interaction across social groups (Pettigrew, 1998). However, the same conditions used to promote comfortable discussion between diverse participants, may produce threat to the integrity of members' separate group identities (Dovidio, Kawakami, & Beach, 2001). The contact experienced during intensive dialogue may also reveal overlapping social categories and contribute to a broadening of the in-group category. These cross-cutting identities may operate to reduce salience by making identity categories more complex, reducing the relevance of intergroup comparisons, and reducing the importance of a single identity category, such as racial/ethnic identity, in satisfying an individual's need for social belonging. The findings of this study have direct implications for the design and implementation of courses which utilize intensive

dialogue, as well as intergroup dialogue programs. Future research in this area should examine not only the role of intensive dialogue in racial understanding but also the relationship of dialogue to racial/ethnic identity development.

While it is unclear what teaching or training methodologies were used in the courses with intensive dialogue, numerous useful strategies have been cited in multicultural education research. Some of these strategies include journaling, in which individuals reflect on specific incidents of oppression and privilege; use of critical incidents to identify how race and privilege operate in one's life; use of dyads and sharing of stories to acknowledge cultural differences and similarities; and use of role plays and the empty chair technique to assume the roles of privileged and oppressed individuals regarding power differentials (Hays & Chang, 2003). Regardless of the strategy, learning what other people think does influence stereotypic beliefs which may in turn foster racial/ethnic identity development.

*Service learning.* The independent variable representing service learning is only significant for those students identifying as Asian Pacific Americans. Contrary to Teranishi's (2007) finding that students' understanding of the meaning of their ethnic identities grew throughout a service-learning program, this group of students actually tend to think less about their race as a result of enrolling in courses with a service-learning component. Service-learning opportunities may shift the focus of APA students from inward to outward on members of the community that they are serving. If the goal is to positively impact student's racial identity, APA students would benefit from service-learning opportunities that place them in direct contact with members of the APA community.

## **Recommendations for Administrators and Faculty in Higher Education**

Having provided empirical support of group similarities and differences in the racial/ethnic identity development of White students and students of color, this study holds important implications for both practice and research. In terms of practice, the difference in the significance of co-curricular and curricular experiences suggests that administrators and faculty should employ multiple approaches to support and promote students' racial/ethnic identity development. Some recommended approaches are discussed below followed by research recommendations and conclusion.

### ***College Administrators***

*Cultural Programs and Multicultural Activities.* Administrators should increase the attention given to the development of all student groups by supporting cultural programs and multicultural activities. Administrators should work collaboratively with faculty and students to design and implement campus-wide programs to promote racial/ethnic identity development. Students continue to differ in their responses to race and racial issues as well as their identification with other members of their racial/ethnic community. "As a result, the effectiveness of practitioners may be reflective of the extent to which the programs and events that they design are developmentally appropriate for the full range of racial identity statuses exhibited by students on their respective campuses.

Colleges should continue to support the role of cultural organizations in diverse college environments. Cultural organizations serve to enhance the racial/ethnic identity development of both White and non-White college students. The results of this study support the need for students to have some space in which they feel like they belong and

are able to engage in intra- and intercultural contact. “Student organizations should be marketed as outlets for students to learn more about themselves and others, as well as opportunities to develop a set of cross-cultural communication skills that will prove useful during college and in their post-college endeavors.”

*Organizational Commitment to Diversity and Multicultural Competence.* Shifting student demographics require institutions to demonstrate a clear and accountable commitment to diversity. Colleges and universities must strive to show their commitment to diversity not only by increasing the enrollment of minority students but also creating opportunities for students to strengthen their racial/ethnic identities. Such student opportunities include: (1) interacting with other students from various racial/ethnic groups, (2) sharing a safe space with members of one’s racial group, and (3) participating in intergroup dialogues and courses that explore issues of race and ethnicity.

Administrators should understand what strategies can be used to support and challenge students in the development of a more advanced racial/ethnic identity. When planning, programming, and establishing policies, institution’s should take into account the culture, race, ethnicity, age, and ability of the students they serve. Institutions considered diverse serve a heterogeneous group of people from a broad range of backgrounds. An understanding of racial identity development may serve as a further reminder of the heterogeneity of the student community.

Institutions must continue to hire diverse faculty that can provide students with various perspectives on the world. Faculty must understand the value and importance of their role in the identity development of students. Also, faculty must be trained on

broadening their multicultural competence and addressing the interests, concerns, and issues of the diverse community they serve.

*Campus Climate and Culture.* Efforts of the institution should focus on shaping and strengthening the campus climate and culture. Theories of racial identity development should be used as a means to assess campus climate and determine areas where institutions could enhance opportunities for student learning and development (Renn, 2003). Likewise, administrators should be encouraged to develop procedures and policies that assist students in their development of healthy racial/ethnic identities. Faculty, as well, should be encouraged to develop curriculum that acknowledges the racial/ethnic identities of both majority and minority students.

“Every student should be able to see important parts of him/herself reflected in some way. All should be able to find themselves in the faces of other students and among the faculty and staff, as well as reflected in the curriculum.” Furthermore, organizations and programs that reflect personal, cultural, or service interests help students feel that they belong on campus, that they are contributing to the campus culture, and that their interests are reflected in the institutions. Students who feel affirmed in this way not only strengthen their own racial identity but also reach out beyond their own identity groups to engage with others.

### ***College Faculty***

*Racial Identity and Multicultural Competence.* Faculty must understand their own racial identity in order to be supportive of the racial/ethnic identity exploration of their students. Faculty members should examine their sense of racial identity and their attitudes toward other groups, as well as develop effective antiracist curricular and

educational practices that would affirm student identities. Faculty members should become more informed about the history and culture of groups other than their own. They should strive for some measure of multicultural competence by knowing what is appropriate and inappropriate behavior and speech for different cultures. Faculty can also learn about other groups by sponsoring mono- or multicultural student organizations and attending campuswide activities celebrating diversity or events important to various ethnic and cultural groups.

The educational philosophies and teaching goals of faculty are central to the success of diverse classrooms and are indicative of whether faculty members value such classrooms. Faculty can prepare for diverse classrooms by: being open to and appreciative of issues of diversity; having confidence in one's teaching ability; invalidating one's own stereotypes; and approaching teaching in a diverse classroom as a benefit, not a burden. Faculty should also recognize their own stereotypes and racial/ethnic biases. They should examine how their own experiences, values, beliefs, and stereotypes inform the way they interact with individuals whose racial/ethnic backgrounds differ from their own, as well as influence their knowledge and understanding of other groups.

*Course Content.* Faculty should view racial/ethnic identity development as a conceptual framework for creating and implementing curricula. According to Carter and Goodwin (1994), transforming curricula to promote the development of racial/ethnic identity levels on the part of all students will alter the perceptions students from various racial/ethnic groups have of themselves. The idea of racially and culturally responsive

pedagogy becomes sharper when one considers instruction that aims to both respond to and further develop students' racial/ethnic identities.

The content of a faculty member's course should reflect the perspectives and experiences of a pluralistic society. An inclusive course uses texts and readings that reflect new scholarship and research about previously underrepresented groups, discusses the contributions of various ethnic groups, and describes how recent scholarship about gender, race, and class is relevant to the course. Also, inclusive courses do not place women, people of color, and non-European or non-American cultures as "asides" or special topics. Such courses value the experiences of all groups and do not view one group's experience as the norm or the standard against which everyone else is defined (Jenkins, Gappa, and Pearce, 1983). With the diversity of experiences in today's classroom, faculty should understand that merely grounding learning in students' experiences is not enough; purposefully providing students with language, theory, and cognitive tools to understand better the complexity of race, racial/ethnic identity, and race relations may facilitate racial/ethnic identity development for some and enhance it for others.

In order to effectively promote racial/ethnic identity development it is essential for faculty to recognize and acknowledge that there are other groups, besides African Americans and Whites, for whom racial issues are relevant (Arab Americans, Asian Americans, Latinos/as, Native Americans, etc.). Whenever possible, perspectives on racial issues from other groups should be included in course materials. When appropriate, speakers representing various racial/ethnic groups should be invited to present and offer other perspectives into course lectures and discussions.



Tatum (1992) recommends the following four strategies for developing and sustaining instruction that supports racial/ethnic identity development. First, a safe classroom atmosphere should be created by establishing clear guidelines for discussion. Guidelines addressing confidentiality, mutual respect, and speaking from one's own experiences should be established during the first class session. Secondly, opportunities should exist for self-generated knowledge on the parts of students. While students may challenge the validity of what they read or what they hear from their instructor, it is harder for them to deny what they have witnessed themselves. Thirdly, students should be provided with an appropriate developmental model which can be used to help them understand their own process. By sharing the model of racial/ethnic identity development with students, they have a useful framework for understanding their classmates' processes as well as their own. Lastly, students should be given the opportunity to explore strategies for becoming change agents. As students develop a heightened awareness of racism they should also be developing an awareness of the possibility of change.

*Classroom Climate.* Classroom climate should be facilitative of personal and interpersonal growth. Faculty should be aware of how racial identity and racial dynamics impinge on the educational climate of the classroom. Establishing a positive classroom climate requires faculty to communicate how they value diversity and how student diversity can contribute to their learning experience in the class. Students should not be forced to serve as the spokesperson for their group nor should they be expected to know everything about issues relating to their group. Likewise, it should not be assumed that students who share racial/ethnic backgrounds feel the same way about an issue. Students

should know that they have a place in the classroom and that their racial/ethnic identities and different perspectives are important components of the learning process.

During their college years, adolescents of color and White youth tend to be on very different developmental timelines in terms of their racial identity development. This difference is a potential source of misunderstanding and conflict. However, when students (and faculty) understand the process of racial identity development they have a framework for understanding each other's processes as well as their own. This cognitive framework does not necessarily prevent conflict, but it does allow students to feel less frightened and resentful when it occurs.

### **Recommendations for Future Research and Conclusion**

The paucity of research highlighting the relationship between racial identity and college student development underscores the need to continue this line of research. Given the differential impact of college environment on the racial identity development of diverse student groups, future research should seek to identify specific diversity-related co-curricular and curricular activities and programs that positively influence the racial/ethnic identity development of White, Asian American, Latino, and African American students. Future research should also examine the varied characteristics of higher education institutions, such as racial composition and climate, that serve to promote (or attenuate) identity development.

Beyond the stages of racial/ethnic identity development, dimensions of racial/ethnic identity provide a useful framework for practitioners and researchers to better understand the college experiences of diverse student groups. As previously noted, the outcome measures used in this study were limited to three dimensions of racial/ethnic

identity development. Future research should continue to consider dimensions of racial/ethnic identity individually as they appear to differentially relate to diversity-related co-curricular and curricular experiences. In light of the significance of discrimination to the identity development of White students, researchers should also give further consideration to ethnic subgroups and intragroup differences in ethnic/racial identity development. These differences may become obscured when ethnic and racial groups are combined indiscriminately in studies. Similar racial/ethnic identity development research should also be conducted with a focus on the experiences of Native American students, as well as multi-racial/multi-ethnic students, since these group were not included in this study.

This study adds to existing research on racial/ethnic identity development and furthers research on the value of diversity. As student populations increase in diversity, colleges and universities must solidify their commitment to understanding the nuances of each population. Through a better understanding, faculty, staff, and administrators can better facilitate and support the academic and identity development of students. Institutions must be prepared to offer all students the opportunity to explore their racial/ethnic identities while engaging in diverse experiences. Classes that emphasize the contributions of all populations and that encourage students' self-exploration give students an opportunity to reflect on their ideals on race. Likewise, college programs and activities that consider students' race and ethnicity and support intra- and interracial interactions provide students with the opportunity to appreciate likeness and experience difference.

Students enter college with a unique history and perspective on race. At the time of entry, each student will be at a different place developmentally and will identify differently. In addition, they will often present themselves physically in one way, but connect psychologically in another. It is important that these students have a safe space where they are able to fully appreciate and value their racial/ethnic identity. It is equally important that they encounter faculty, staff, and administrators who are diverse, open-minded, and supportive of students' racial/ethnic identity development.

## **APPENDICES**

**APPENDIX A**

**PREPARING COLLEGE STUDENTS FOR A DIVERSE DEMOCRACY  
FIRST YEAR STUDENT VIEWS AND EXPERIENCES**

# Preparing College Students for a Diverse Democracy: First Year Student Views and Experiences



\*\*\*\*\*

Dear Student: This survey is part of a national, collaborative project sponsored by the U.S. Department of Education. This campus has agreed to involve you in order to learn about students' college experiences and find ways universities might improve student preparation for living in a diverse democracy. Your participation is important to us; but it is voluntary and you do not have to answer questions that make you feel uncomfortable. Responses are strictly confidential. Identifying information will be used only for purposes of following up to find out about the quality of your experiences at this university. Thank you in advance for your assistance in this national effort.

\*\*\*\*\*

### Statement of Consent

I understand that this survey is administered by my institution in collaboration with researchers to understand students' experiences within a diverse democracy.

I hereby voluntarily give permission for my responses to be used as data in this study. I understand that all responses are completely confidential and that my name will not be associated with my responses. I understand that my name and other identifying factors will not be associated with any document produced from this research. I understand that I can express my ideas and opinions without consequence.

I may contact campus administrators or the national Project Director, Sylvia Hurtado, 2117 SEB, Ann Arbor MI 48109-1259 any time with questions or concerns about this study.

\_\_\_\_\_  
Print your name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\*\*\*\*\*

Please indicate your answer to each question by filling in the oval representing the category which best describes your views on the issue.

Marking instructions:

Blacken in each oval completely using a number 2 pencil. If you erase, erase completely.

INCORRECT MARKS



CORRECT MARK



Continue on the next page

PLEASE DO NOT MARK IN THIS AREA



40102





**I. Precollegiate Experiences/Background**

1. What type of high school did you graduate from? (Mark one)

- Public  GED  
 Religious  Home school or other  
 Private, nonreligious

2. How would you rate yourself in the following areas? (Mark one for each item)

	A major weakness	Average	A major strength
a. Communication skills	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
b. Ability to work cooperatively with diverse people	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
c. Writing ability	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
d. Knowledge about my own culture	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
e. Math ability	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
f. Racial/cultural awareness	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
g. Ability to solve complex problems	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
h. Openness to having my views challenged	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
i. Leadership ability	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
j. Ability to see the world from someone else's perspective	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
k. Knowledge about the cultural backgrounds of others	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
l. Ability to discuss and negotiate controversial issues	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
m. Academic ability	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
n. Tolerance of others with different beliefs	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
o. Social self-confidence	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)

3. How many colleges did you apply to for Fall 2000 admission (including this one)? (Mark one)

- 1 college  4 colleges  
 2 colleges  5 colleges  
 3 colleges  6 or more

4. How many acceptances did you receive? (Mark one)

- 1  4  
 2  5  
 3  6 or more

5. Is this college your: (Mark one)

- 1st choice  3rd choice  
 2nd choice  less than 3rd choice

6. Following is a list of reasons why some people select a particular college. How important was each of these reasons for your attendance at this university? (Mark one for each item)

	Essential	Somewhat important
a. Desire to be near or live at home	(1) (2) (3) (4)	(1) (2) (3) (4)
b. Good academic reputation of the university	(1) (2) (3) (4)	(1) (2) (3) (4)
c. Athletic program	(1) (2) (3) (4)	(1) (2) (3) (4)
d. Academic support programs (tutoring, writing center, etc.)	(1) (2) (3) (4)	(1) (2) (3) (4)
e. Social life	(1) (2) (3) (4)	(1) (2) (3) (4)
f. Recruitment and admissions programs made you feel welcome	(1) (2) (3) (4)	(1) (2) (3) (4)
g. Financial aid support	(1) (2) (3) (4)	(1) (2) (3) (4)
h. Racially and ethnically diverse student body	(1) (2) (3) (4)	(1) (2) (3) (4)
i. Alumni	(1) (2) (3) (4)	(1) (2) (3) (4)
j. Comfort with campus environment	(1) (2) (3) (4)	(1) (2) (3) (4)
k. Lower cost than other institutions	(1) (2) (3) (4)	(1) (2) (3) (4)
l. High school teacher or counselor	(1) (2) (3) (4)	(1) (2) (3) (4)
m. Parents/guardians, family members, friends	(1) (2) (3) (4)	(1) (2) (3) (4)

7. Where did you rank academically in your high school graduating class? (Mark one)


- Top 5%  Top 50%  
 Top 10%  Top 75%  
 Top 25%  Lowest 25%  
 Don't Know

8. Indicate how frequently you engaged in any of the following during high school: (Mark one for each item)

	Never	A few times per month	Daily
a. Used a computer to do homework	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
b. Discussed politics with students	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
c. Discussed racial/ethnic issues	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
d. Participated in student clubs	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
e. Engaged in volunteer work	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
f. Studied with someone from a different racial or ethnic group	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
g. Participated in an academic honor society	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
h. Participated in varsity sports	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
i. Participated in activities to clean up the environment	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
j. Worked on school publications	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
k. Read a newspaper	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
l. Followed the presidential election process	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
m. Participated in religious activities or spiritual ceremonies	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)
n. Used the Internet or web	(1) (2) (3) (4)	(1) (2) (3) (4)	(1) (2) (3) (4)

9. Which best describes where you lived most of your life before college? (Mark one)

- Urban area  Small town  
 Suburban area  Rural area

Continue on the next page 

**I. Precollegiate Experiences/Background (con't)**

10. How would you describe the racial/ethnic composition of the following: (People of color includes African Americans, Hispanics, Asian Americans and American Indians) (Mark one for each item)

- |    |                                     |     |     |     |
|----|-------------------------------------|-----|-----|-----|
|    | All or nearly all people of color   | (1) | (2) | (3) |
|    | Half white and half people of color | (1) | (2) | (3) |
|    | All or nearly all white             | (1) | (2) | (3) |
| a. | Neighborhood where you grew up      | (1) | (2) | (3) |
| b. | High school that you graduated from | (1) | (2) | (3) |
| c. | Your friends in high school         | (1) | (2) | (3) |

11. In high school, how often did you encounter discrimination based on your: (Mark one for each item)

- |    |                       |     |     |     |
|----|-----------------------|-----|-----|-----|
|    | Never                 | (1) | (2) | (3) |
|    | Frequently            | (1) | (2) | (3) |
| a. | Race/ethnicity        | (1) | (2) | (3) |
| b. | Gender                | (1) | (2) | (3) |
| c. | Sexual orientation    | (1) | (2) | (3) |
| d. | Economic background   | (1) | (2) | (3) |
| e. | Religious affiliation | (1) | (2) | (3) |

**II. Transition to College**

12. Mark all the statements that apply to you:

- a. One or both of my parents went to college here.
- b. I received a scholarship to attend here.
- c. I went to a two-year college before entering here.
- d. I am the first in my family to go to college.
- e. I received need-based financial aid.
- f. I have attended a diversity awareness program.
- g. I wrote a paper at least 15 pages long.
- h. I spoke another language other than English at home.
- i. I received merit-based financial aid.
- j. I took a class on multicultural/diversity issues.
- k. I applied for a loan to pay for college.

13. How difficult do you think each of the following will be during your first year at the University? (Mark one for each item)

- |    |  |     |     |     |
|----|--|-----|-----|-----|
|    | Very easy                                      | (1) | (2) | (3) |
|    | Somewhat difficult                             | (1) | (2) | (3) |
| a. | Keeping up with school work                    | (1) | (2) | (3) |
| b. | Making new friends                             | (1) | (2) | (3) |
| c. | Finding academic help when you need it         | (1) | (2) | (3) |
| d. | Paying for college expenses                    | (1) | (2) | (3) |
| e. | Feeling comfortable in your living environment | (1) | (2) | (3) |
| f. | Managing family responsibilities               | (1) | (2) | (3) |
| g. | Getting to know your way around                | (1) | (2) | (3) |

14. Which of the following best describes your living situation during your first year of college? (Mark one)

- With parents or relatives
- Off-campus (not with parents)
- Residence hall
- Other campus housing

15. How likely are you to do the following during your college career? (Mark one for each item)

- |    |  |     |     |     |
|----|--|-----|-----|-----|
|    | Unlikely   | (1) | (2) | (3) |
|    | Very likely  | (1) | (2) | (3) |
| a. | Get elected to student office.   | (1) | (2) | (3) |
| b. | Work at least part-time while in college.  | (1) | (2) | (3) |
| c. | Join a social fraternity or sorority.  | (1) | (2) | (3) |
| d. | Need extra time to complete your degree.   | (1) | (2) | (3) |
| e. | Get tutoring help in specific courses.   | (1) | (2) | (3) |
| f. | Participate in student protests.   | (1) | (2) | (3) |
| g. | Transfer to another college before graduating.                                       | (1) | (2) | (3) |
| h. | Drop out of college temporarily (exclude transferring).                              | (1) | (2) | (3) |
| i. | Drop out permanently (exclude transferring).   | (1) | (2) | (3) |
| j. | Compete in intercollegiate athletics.  | (1) | (2) | (3) |
| k. | Participate in groups and activities reflecting your own cultural-ethnic background. | (1) | (2) | (3) |
| l. | Take a course devoted to diversity issues in your first year of college.             | (1) | (2) | (3) |
| m. | Help members of the community get out to vote in elections.                          | (1) | (2) | (3) |
| n. | Challenge others on racially/sexually derogatory comments.                           | (1) | (2) | (3) |
| o. | Join an organization that promotes cultural diversity.                               | (1) | (2) | (3) |
| p. | Make an effort to educate others about social issues.                                | (1) | (2) | (3) |
| q. | Make efforts to get to know individuals from diverse backgrounds.                    | (1) | (2) | (3) |

16. What is the highest academic degree that you intend to obtain? (Mark one)

- None
- Bachelor's Degree
- Master's Degree (e.g. MS, MBA, MDiv)
- Doctorate (e.g. PhD, EdD)
- Professional Degree (e.g. JD, MD)
- Other

**III. Preferences for Thinking and Interacting**

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

- |    |  |     |     |     |
|----|--|-----|-----|-----|
|    | Disagree somewhat  | (1) | (2) | (3) |
|    | Strongly agree   | (1) | (2) | (3) |
| a. | Students who talk a lot about societal problems turn me off.                           | (1) | (2) | (3) |
| b. | I try to keep up with current events.  | (1) | (2) | (3) |
| c. | Thinking about how this country will change in the future is of little interest to me. | (1) | (2) | (3) |
| d. | I enjoy talking with other people about the reasons and possible solutions to poverty. | (1) | (2) | (3) |
| e. | I spend little time thinking about race relations in this country.                     | (1) | (2) | (3) |
| f. | I would probably find a television show on poverty in the U.S. to be interesting.      | (1) | (2) | (3) |
| g. | I want to gain a broad, intellectually exciting education.                             | (1) | (2) | (3) |
| h. | I enjoy getting into discussions about political issues.                               | (1) | (2) | (3) |
| i. | I often think about the amount of power people in different segments of society have.  | (1) | (2) | (3) |
| j. | When I see a homeless person, I think about how it could happen to me.                 | (1) | (2) | (3) |
| k. | I learn the most about societal issues in discussions with diverse peers.              | (1) | (2) | (3) |



**IV. Attitudes and Beliefs (con't)**

23. In your role as a responsible citizen in this society, how important are each of the following to you? (Mark one for each item)

	Essential	Somewhat important	Not important
a. Working to end poverty.	(1)	(2)	(3)
b. Paying taxes to support public services.	(3)	(2)	(1)
c. Using career-related skills to work in low-income communities.	(3)	(2)	(1)
d. Contributing money to a political cause.	(3)	(2)	(1)
e. Supporting a strong military.	(3)	(2)	(1)
f. Promoting racial tolerance and respect.	(3)	(2)	(1)
g. Contributing money to a charitable cause.	(3)	(2)	(1)
h. Defending the right to own a gun.	(3)	(2)	(1)
i. Voting in national elections.	(3)	(2)	(1)
j. Creating awareness of how people affect the environment.	(3)	(2)	(1)
k. Working to minimize government involvement in individual affairs.	(3)	(2)	(1)
l. Making consumer decisions based on a company's ethics.	(3)	(2)	(1)
m. Speaking up against social injustice.	(3)	(2)	(1)
n. Volunteering with community groups or agencies.	(3)	(2)	(1)

24. Many colleges have programs for diversity education. Indicate whether you support or oppose each of following: (Mark one for each item)

	Strongly support	Support	Oppose somewhat	Oppose
a. Incorporating writings and research about different ethnic groups and women into courses.	(1)	(2)	(3)	(4)
b. Requiring students to complete a community-based experience with diverse populations.	(1)	(2)	(3)	(4)
c. Offering courses to help students develop an appreciation for their own and other cultures.	(1)	(2)	(3)	(4)
d. Requiring students to take at least one cultural or ethnic diversity course in order to graduate.	(1)	(2)	(3)	(4)
e. Offering opportunities for intensive discussion between students with different backgrounds and beliefs.	(1)	(2)	(3)	(4)

25. Indicate the extent to which you agree or disagree with each statement. (Mark one for each item)

	Disagree somewhat	Disagree	Agree	Strongly agree
a. Racial/ethnic discrimination is no longer a major problem in the U.S.	(1)	(2)	(3)	(4)
b. It's fair to give preference in college admissions to children of alumni.	(1)	(2)	(3)	(4)
c. Many Whites lack an understanding of the problems that people from different racial/ethnic groups face.	(1)	(2)	(3)	(4)
d. Colleges should support women's athletics as much as they support men's athletics.	(1)	(2)	(3)	(4)
e. Our society has done enough to promote the welfare of different racial/ethnic groups.	(1)	(2)	(3)	(4)
f. A high priority should be given to see that students of color receive financial aid for college.	(1)	(2)	(3)	(4)
g. Hiring more faculty of color should be a top priority of this University.	(1)	(2)	(3)	(4)
h. The system prevents people of color from getting their fair share of good jobs and better pay.	(1)	(2)	(3)	(4)
i. State hate crimes laws are needed to protect people from harassment based on race, gender or sexual orientation.	(1)	(2)	(3)	(4)
j. A person's racial background in this society does not interfere with achieving everything he or she wants to achieve.	(1)	(2)	(3)	(4)
k. Colleges should aggressively recruit more students of color.	(1)	(2)	(3)	(4)
l. Enhancing a student's ability to live in a multicultural society is part of a university's mission.	(1)	(2)	(3)	(4)
m. Colleges do not have a responsibility to correct racial/ethnic injustice.	(1)	(2)	(3)	(4)
n. Emphasizing diversity contributes to disunity on campus.	(1)	(2)	(3)	(4)

26. We are all members of different social identity groups (e.g., gender, race, ethnicity, sexual orientation, socio-economic class, etc.). How often do you think about your: (Mark one for each item)

	Rarely	Sometimes	Often
a. Gender	(1)	(2)	(3)
b. Race	(1)	(2)	(3)
c. Ethnicity	(1)	(2)	(3)
d. Sexual orientation	(1)	(2)	(3)
e. Physical or learning disability	(1)	(2)	(3)
f. Socio-economic class	(1)	(2)	(3)

**IV. Attitudes and Beliefs (con't)**

27. Indicate the extent to which you agree or disagree with each statement. (Mark one for each item)

- Disagree somewhat  
Strongly agree
- a. It is important for me to educate others about the social identity groups to which I belong. (1) (2) (3) (4) (5)
- b. I often think about what I have in common with others in my racial/ethnic group. (1) (2) (3) (4) (5)
- c. I like to learn about social identity groups different from my own. (1) (2) (3) (4) (5)
- d. I would probably not be able to continue my friendship with a friend who I discovered was homosexual. (1) (2) (3) (4) (5)
- e. I think that what generally happens to people in my racial/ethnic group will affect what happens in my life. (1) (2) (3) (4) (5)
- f. I want to bridge differences between social identity groups. (1) (2) (3) (4) (5)
- g. I am physically attracted to women. (1) (2) (3) (4) (5)
- n. I feel proud when a member of my racial/ethnic group accomplishes something outstanding. (1) (2) (3) (4) (5)
- l. Women should be taken as seriously as men in the classroom. (1) (2) (3) (4) (5)
- j. If I found out someone I knew was gay, lesbian, or bisexual, I'd be accepting and supportive. (1) (2) (3) (4) (5)
- k. Students with disabilities should not be given extra time to take tests. (1) (2) (3) (4) (5)
- l. Immigrants should receive the same public services as U.S. citizens. (1) (2) (3) (4) (5)
- m. I am physically attracted to men. (1) (2) (3) (4) (5)
- n. To treat everyone fairly, we need to ignore the color of people's skin. (1) (2) (3) (4) (5)
- o. Romantic relationships between people of the same gender are as acceptable as they are for heterosexual couples. (1) (2) (3) (4) (5)
- p. I would vote in a presidential election for a qualified woman whose views are similar to mine. (1) (2) (3) (4) (5)
- q. I am not likely to date or marry someone from a race/ethnicity different than my own. (1) (2) (3) (4) (5)

28. Indicate whether you think each of the following racial/ethnic groups have similar or different values and beliefs from your own. (Mark one for each item)

- Somewhat similar  
Very different
- a. African Americans/Blacks (1) (2) (3) (4) (5)
- b. Hispanics/Latinos/Chicanos (1) (2) (3) (4) (5)
- c. Asian Americans/Pacific Islanders (1) (2) (3) (4) (5)
- d. Whites/Caucasians (1) (2) (3) (4) (5)
- e. Native American/American Indians/Alaskan Natives (1) (2) (3) (4) (5)

**V. Demographic Information**

29. What is your gender? (Mark one)

- Male  Female

30. What is your current marital status? (Mark one)

- Single, never married  Separated  
 Married  Divorced  
 Living with someone in a marriage-like relationship  Widowed

31. Do you have a disability? (Mark all that apply)

- a. None  
 b. Learning disability  
 c. Physical/health related disability  
 d. Other disability

32. How do you identify yourself racially/ethnically? (Mark all that apply)

- a. African American/Black  
 b. Asian American/Pacific Islander (includes the Indian subcontinent)  
 c. Native American/American Indian/Alaskan Native  
 d. Hispanic/Latino/Chicano  
 e. White/Caucasian (not of Hispanic origin; persons having origins in Europe, North Africa, or the Middle East)

33. What is the highest level of education completed by each of your parents/guardians? (Mark one in each column)

Level of education completed	Mother	Father
Don't Know	<input type="radio"/>	<input type="radio"/>
Some high school	<input type="radio"/>	<input type="radio"/>
High school graduate	<input type="radio"/>	<input type="radio"/>
Some college	<input type="radio"/>	<input type="radio"/>
Bachelor's degree	<input type="radio"/>	<input type="radio"/>
Master's degree	<input type="radio"/>	<input type="radio"/>
Doctorate or professional degree (e.g. JD, MD, PhD)	<input type="radio"/>	<input type="radio"/>

34. What is your best estimate of your total family income last year? Consider income from all sources before taxes: (Mark one)

- Less than \$10,000  \$40,000-59,999  
 \$10,000-19,999  \$60,000-99,999  
 \$20,000-29,999  \$100,000-149,999  
 \$30,000-39,999  \$150,000 or more

35. Which of the following most accurately describes your generation and citizenship status? (Mark one)

- At least one of my grandparents, my parents and I are U.S. born.  
 At least one of my parents and I are U.S. born.  
 I am U.S. born, my parents are not.  
 Foreign born - naturalized citizen.  
 Foreign born - resident alien or permanent resident.  
 Student visa.

Continue on the next page





Your campus may have a page of additional questions. Follow instructions on the extra page and mark your answers here for each of the final set of questions provided by your campus.

- 36. (1) (2) (3) (4) (5)
- 37. (1) (2) (3) (4) (5)
- 38. (1) (2) (3) (4) (5)

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- 39. (1) (2) (3) (4) (5)
- 40. (1) (2) (3) (4) (5)
- 41. (1) (2) (3) (4) (5)

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- 42. (1) (2) (3) (4) (5)
- 43. (1) (2) (3) (4) (5)
- 44. (1) (2) (3) (4) (5)

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- 45. (1) (2) (3) (4) (5)
- 46. (1) (2) (3) (4) (5)
- 47. (1) (2) (3) (4) (5)

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- 48. (1) (2) (3) (4) (5)
- 49. (1) (2) (3) (4) (5)
- 50. (1) (2) (3) (4) (5)



Thank you for participating! If you have any questions about the study, you may contact Sylvia Hurtado, Project Director, Center for the Study of Higher and Postsecondary Education, 2117 SEB, Ann Arbor MI, 48109-1259. © 2000



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**APPENDIX B**

**PREPARING COLLEGE STUDENTS FOR A DIVERSE DEMOCRACY  
SECOND-YEAR STUDENT VIEWS AND EXPERIENCES**

# Preparing College Students for a Diverse Democracy: Second-Year Survey of Student Views and Experiences



\*\*\*\*\*

Dear Student: This survey is part of a national, collaborative project sponsored by the U.S. Department of Education. This campus has agreed to involve you in order to learn about students' college experiences and find ways universities might improve student preparation for living in a diverse democracy. Your participation is important to us; but it is voluntary and you do not have to answer questions that make you feel uncomfortable, and you can withdraw at anytime. Responses are strictly confidential. Identifying information will be used only for purposes of following up to find out about the quality of your experiences at this university. Thank you in advance for your assistance in this national effort.

\*\*\*\*\*

### Statement of Consent

I am over 17 years of age, in good physical health, and understand that this survey is administered by my institution in collaboration with researchers to understand students' experiences within a diverse democracy.

I hereby voluntarily give permission for my responses to be used as data in this study. I understand that all responses are completely confidential and that my name will not be associated with my responses. I understand that my name and other identifying factors will not be associated with any document produced from this research. I understand that my name and ID number will be used to merge responses from this survey and the first-year survey and that after all data have been merged, my name and ID number will be removed from the data set. I understand that I can express my ideas and opinions without consequence and that there are no known risks to participating in this project.

I may contact campus administrators or the national Project Director, Sylvia Hurtado, 2117 SEB, Ann Arbor MI 48109-1259 any time with questions or concerns about this study. Additionally, I may contact the Chairperson of my campus IRB Office with any questions regarding my participation in this study.

\_\_\_\_\_  
Print your name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\*\*\*\*\*

Please indicate your answer to each question by filling in the oval representing the category which best describes your views on the issue.

Marking instructions:

Blacken in each oval completely using a number 2 pencil  
If you erase, erase completely.

INCORRECT MARKS



CORRECT MARK



Continue on  
the next page



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**I. Experiences/Background**

**1. Which University did you enter in Fall 2000?**

(Mark one only)

- Arizona State Univ.
- Norfolk State Univ.
- UCLA
- Univ. of Maryland
- Univ. of Massachusetts
- Univ. of Michigan
- Univ. of Minnesota
- Univ. of New Mexico
- Univ. of Vermont
- Univ. of Washington

**2. Which of the following describes your current enrollment status? (Mark one only)**

- Enrolled at the same university I entered in Fall 2000
- Enrolled at a different college/university
- Not enrolled at any college/university

**3. Will you enroll at this university in Fall 2002?**

- No
- Yes

\*\*\*\*\*

Please complete the survey even if you are no longer enrolled at the university marked in question 1.

\*\*\*\*\*

**4. How difficult was each of the following during your first year at the University? (Mark one for each item)**

- |   | Very easy                  | Somewhat easy              | Somewhat difficult         | Very difficult             |
|---|----------------------------|----------------------------|----------------------------|----------------------------|
| a. Keeping up with school work                    | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| b. Making new friends                             | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| c. Finding academic help when you needed it       | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| d. Paying for college expenses                    | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| e. Feeling comfortable in your living environment | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| f. Managing family responsibilities               | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| g. Getting to know your way around                | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |

**5. How would you currently rate yourself in the following areas? (Mark one for each item)**

- |   | A major strength           | Somewhat strong            | Average                    | Somewhat weak              | A major weakness           |
|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| a. Communication skills                                     | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| b. Ability to work cooperatively with diverse people        | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| c. Writing ability  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| d. Knowledge about my own culture                           | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| e. Math ability   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| f. Racial/cultural awareness                                | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| g. Ability to solve complex problems                        | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| h. Openness to having my views challenged                   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| i. Leadership ability                                       | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| j. Ability to see the world from someone else's perspective | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| k. Knowledge about the cultural backgrounds of others       | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| l. Ability to discuss and negotiate controversial issues    | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| m. Academic ability   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| n. Tolerance of others with different beliefs               | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| o. Social self-confidence                                   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |

**6. Mark all of the activities that apply to you since you entered college:**

- a. Participated in intercollegiate athletics
- b. Helped members in the community to get out and vote
- c. Lived in a culturally-themed residence hall/floor/house
- d. Assisted on faculty research projects
- e. Studied abroad (outside of U.S.)
- f. Voted in federal/state elections
- g. Joined a sorority or fraternity
- h. Joined an organization reflecting my own cultural heritage
- i. Held a campus leadership position (e.g. student government, Resident Advisor, club officer, etc.)
- j. Transferred from another college
- k. Joined an organization that promotes cultural diversity
- l. Joined an Asian, Black or Latino sorority or fraternity
- m. Dropped out of college temporarily
- n. Lived with people from cultural backgrounds different than my own
- o. Voted in student government elections

**7. Since coming to the University, how often have you done the following? (Mark one for each item)**

- |  | Very often                 | Often                      | Sometimes                  | Seldom                     | Never                      |
|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| a. Participated in class discussion  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| b. Made an effort to educate others about social issues  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| c. Felt challenged to think more broadly about an issue  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| d. Heard students express stereotypes about racial/ethnic groups   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| e. Participated in student protests  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| f. Fell asleep in class  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| g. Felt insulted or threatened based on my sexual orientation  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| h. Made efforts to get to know individuals from diverse backgrounds  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| i. Felt overwhelmed by all I had to do   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| j. Challenged others on racial/sexually derogatory comment   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| k. Talked to high school students about college  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| l. Engaged in discussions about racial/ethnic issues in class  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| m. Felt pressure from members of my own racial/ethnic group not to socialize with other racial/ethnic groups | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |

**8. What is the highest academic degree that you intend to obtain? (Mark one)**

- None
- Bachelor's Degree
- Master's Degree (e.g. MS, MBA, MDiv)
- Doctorate (e.g. PhD, EdD)
- Professional Degree (e.g. JD, MD)
- Other

Continue on the next page



I. Experiences/Background (con't)

8. Approximately how many hours per week do you typically spend doing the following? (Mark one for each item)

- Over 20 hours
- 16-20 hours
- 12-15 hours
- 8-10 hours
- 4-7 hours
- 0 hours

- a. Working for pay  1  2  3  4  5
- b. Socializing with other students  1  2  3  4  5
- c. Studying  1  2  3  4  5
- d. Attending to home responsibilities  1  2  3  4  5

10. To what extent have you experienced the following with students in a racial/ethnic group other than your own? (Mark one for each item)

- Very often
- Often
- Sometimes
- Seldom
- Never

- a. Dined or shared a meal  1  2  3  4  5
- b. Had meaningful and honest discussions about race/ethnic relations outside of class  1  2  3  4  5
- c. Had guarded, cautious interactions  1  2  3  4  5
- d. Shared personal feelings and problems  1  2  3  4  5
- e. Had tense, somewhat hostile interactions  1  2  3  4  5
- f. Felt insulted or threatened based on my race or ethnicity  1  2  3  4  5
- g. Studied or prepared for class  1  2  3  4  5
- h. Socialized or parted  1  2  3  4  5
- i. Had intellectual discussions outside of class  1  2  3  4  5
- j. Attended events sponsored by other racial/ethnic groups  1  2  3  4  5

11. Since coming to the University, how often have you participated in the following? (Mark one for each item)

- Very often
- Often
- Sometimes
- Seldom
- Never

- a. Events sponsored by a fraternity or sorority  1  2  3  4  5
- b. Residence hall activities (e.g. hall council, social activities, etc.)  1  2  3  4  5
- c. Events or activities sponsored by groups reflecting your own cultural heritage  1  2  3  4  5
- d. Tutoring sessions where you received help for specific courses  1  2  3  4  5
- e. Community service activities  1  2  3  4  5
- f. Academic support programs  1  2  3  4  5
- g. Campus organized discussions on racial/ethnic issues  1  2  3  4  5
- h. Diversity awareness workshops  1  2  3  4  5
- i. Religious or spiritual activities  1  2  3  4  5
- j. Activities to clean up the environment  1  2  3  4  5

12. Which of the following describe your responses to the terrorist attacks on the World Trade Center and Pentagon? (Mark all that apply)

- a. Attended a class, seminar, campus panel, workshop, or information session related to September 11
- b. Felt more aware of my own ethnic minority status or Middle Eastern ethnicity
- c. Attended a campus vigil
- d. Became more aware of being an American
- e. Donated blood
- f. Felt wary of people who appear to be of Middle Eastern descent
- g. Participated in activities to help others
- h. Displayed an American flag
- i. Felt more aware of my status as an international student
- j. Did not participate in any activities related to September 11

II. Classroom Experiences

13. Which best describes the field of your intended major? (Mark only one answer)

- Agricultural Sciences
- Arts (including performing arts, architecture and fine arts)
- Biological Sciences
- Business/Management
- Communications
- Computer Science
- Cultural Studies/Ethnic Studies
- Education
- Engineering
- Health Professions
- Humanities
- Math/Physical Sciences
- Social Sciences
- Social Work
- Undecided

14. Please indicate the extent to which you agree or disagree with the following statements: (Mark one for each item)

- Strongly agree
- Agree somewhat
- Disagree somewhat
- Strongly disagree

- a. There are few students of color in my classes  1  2  3  4  5
- b. I am enthusiastic about this university  1  2  3  4  5
- c. This university offers ample opportunity for students to learn about different racial/ethnic groups in a non-threatening way  1  2  3  4  5
- d. I have been singled out in class because of my race/ethnicity, gender or sexual orientation  1  2  3  4  5
- e. I see myself as a part of the university community  1  2  3  4  5
- f. There is a lot of racial tension on the University campus  1  2  3  4  5
- g. At least one faculty member has taken an interest in my development  1  2  3  4  5
- h. I feel a sense of belonging to this university  1  2  3  4  5
- i. I have heard faculty express stereotypes about racial/ethnic groups in class  1  2  3  4  5
- j. I feel that I am a member of the University community  1  2  3  4  5
- k. Faculty who are racially/ethnically similar to me address issues of greater relevance to me  1  2  3  4  5
- l. If asked, I would recommend this university to others  1  2  3  4  5

**II. Classroom Experiences (con't)**

15. How many courses have you enrolled in that included the following?: (Mark one for each item)

- |  |               |  |
|--|---------------|--|
|  | Three or more |  |
|  | Two           |  |
|  | One           |  |
|  | None          |  |
- a. Material/readings on gender issues  1  2  3  4
  - b. Faculty who created opportunities for class discussions/interactions with other students  1  2  3  4
  - c. Material/readings on issues of oppression  1  2  3  4
  - d. An experience serving communities in need (e.g. service learning)  1  2  3  4
  - e. Material/readings on race and ethnicity issues  1  2  3  4
  - f. Opportunities for intensive dialogue between students with different backgrounds and beliefs  1  2  3  4

**III. Thinking and Interacting**

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

- |  |                   |  |
|--|-------------------|--|
|  | Strongly agree    |  |
|  | Agree somewhat    |  |
|  | Disagree somewhat |  |
|  | Strongly disagree |  |
- a. Students who talk a lot about societal problems turn me off  1  2  3  4
  - b. I try to keep up with current events  1  2  3  4
  - c. Thinking about how this country will change in the future is of little interest to me  1  2  3  4
  - d. I enjoy talking with other people about the reasons and possible solutions to poverty  1  2  3  4
  - e. I spend little time thinking about race relations in this country  1  2  3  4
  - f. I would probably find a television show on poverty in the U.S. to be interesting  1  2  3  4
  - g. I want to gain a broad, intellectually exciting education  1  2  3  4
  - h. I enjoy getting into discussions about political issues  1  2  3  4
  - i. I often think about the amount of power people in different segments of society have  1  2  3  4
  - j. When I see a homeless person, I think about how it could happen to me  1  2  3  4
  - k. I learn the most about societal issues in discussions with diverse peers  1  2  3  4

17. We would like to know your thoughts in a variety of situations. For each item, indicate how well it describes you. (Mark one for each item)


- |  |                    |  |
|--|--------------------|--|
|  | Very much like me  |  |
|  | Somewhat like me   |  |
|  | Not like me        |  |
|  | Not at all like me |  |
- a. I am interested in understanding how my own thinking works when I make judgments about people  1  2  3  4
  - b. I really enjoy analyzing the reason or causes for people's behavior  1  2  3  4
  - c. I think a lot about the influence that society has on other people  1  2  3  4
  - d. I realize that getting along with individuals from different racial groups is more difficult than I originally thought  1  2  3  4
  - e. I prefer simple rather than complex explanations for people's behavior  1  2  3  4
  - f. I believe it is important to analyze and understand our own thinking processes  1  2  3  4
  - g. I think a lot about the influence that society has on my behavior  1  2  3  4

18. How much interaction have you had with people in each of the following groups in college? (Mark one for each item)

- |  |                          |  |
|--|--------------------------|--|
|  | Substantial interaction  |  |
|  | Some regular interaction |  |
|  | Little interaction       |  |
|  | No interaction           |  |
- a. African Americans/Blacks  1  2  3  4
  - b. Hispanics/Latinos/Chicanos  1  2  3  4
  - c. Asian Americans/Pacific Islanders  1  2  3  4
  - d. Whites/Caucasians  1  2  3  4
  - e. American Indians/Alaskan Natives  1  2  3  4
  - f. Gay/Lesbian/Bisexual individuals  1  2  3  4
  - g. People with disabilities  1  2  3  4
  - h. People with different religious beliefs  1  2  3  4

19. Think of your 5 closest friends at this university; how many of them are of a different race/ethnicity from yourself? (Mark one)

- None
- One
- Two
- Three
- Four or more

Continue on the next page 

### III. Thinking and Interacting (cont)

20. People often have differences in perspectives. Indicate how much you agree or disagree with each statement. (Mark one for each item)

- |  | Strongly agree | Agree somewhat | Disagree somewhat | Strongly disagree |
|--|----------------|----------------|-------------------|-------------------|
| a. There are two sides to every issue and I try to look at them both                   | 1              | 2              | 3                 | 4                 |
| b. Conflicting perspectives is healthy in a democracy                                  | 1              | 2              | 3                 | 4                 |
| c. I try to look at everybody's side of a disagreement before I make a decision        | 1              | 2              | 3                 | 4                 |
| d. Conflict is a normal part of life   | 1              | 2              | 3                 | 4                 |
| e. I sometimes find it difficult to see the "other person's" point of view             | 1              | 2              | 3                 | 4                 |
| f. I am afraid of conflicts when discussing social issues                              | 1              | 2              | 3                 | 4                 |
| g. When I'm upset at someone, I usually try to "put myself in their shoes" for a while | 1              | 2              | 3                 | 4                 |
| h. It is best to avoid conflict with others  | 1              | 2              | 3                 | 4                 |
| i. Democracy thrives on differing views  | 1              | 2              | 3                 | 4                 |
| j. Conflict between groups can have positive consequences                              | 1              | 2              | 3                 | 4                 |
| k. Building coalitions from varied interests is key to a working democracy             | 1              | 2              | 3                 | 4                 |

21. Indicate how often you felt uncomfortable in a situation with a person or a group of people who are: (Mark one for each item)

- |                                      | Never | Rarely | Sometimes | Often |
|--------------------------------------|-------|--------|-----------|-------|
| a. Hispanics/Latinos/Chicanos        | 1     | 2      | 3         | 4     |
| b. Whites/Caucasians                 | 1     | 2      | 3         | 4     |
| c. Gays/Lesbians/Bisexuals           | 1     | 2      | 3         | 4     |
| d. Asian Americans/Pacific Islanders | 1     | 2      | 3         | 4     |
| e. African Americans/Blacks          | 1     | 2      | 3         | 4     |
| f. American Indians/Alaskan Natives  | 1     | 2      | 3         | 4     |

### IV. Attitudes and Beliefs

22. In your role as a responsible citizen in this society, how important is each of the following to you? (Mark one for each item)

- |   | Essential | Very important | Somewhat important | Not important |
|---|-----------|----------------|--------------------|---------------|
| a. Working to end poverty   | 1         | 2              | 3                  | 4             |
| b. Paying taxes to support public services                          | 1         | 2              | 3                  | 4             |
| c. Using career-related skills to work in low-income communities    | 1         | 2              | 3                  | 4             |
| d. Contributing money to a political cause                          | 1         | 2              | 3                  | 4             |
| e. Supporting a strong military                                     | 1         | 2              | 3                  | 4             |
| f. Promoting racial tolerance and respect                           | 1         | 2              | 3                  | 4             |
| g. Contributing money to a charitable cause                         | 1         | 2              | 3                  | 4             |
| h. Defending the right to own a gun                                 | 1         | 2              | 3                  | 4             |
| i. Voting in national elections                                     | 1         | 2              | 3                  | 4             |
| j. Creating awareness of how people affect the environment          | 1         | 2              | 3                  | 4             |
| k. Working to minimize government involvement in individual affairs | 1         | 2              | 3                  | 4             |
| l. Making consumer decisions based on a company's ethics            | 1         | 2              | 3                  | 4             |
| m. Speaking up against social injustice                             | 1         | 2              | 3                  | 4             |
| n. Volunteering with community groups or agencies                   | 1         | 2              | 3                  | 4             |

23. Indicate whether you think each of the following racial/ethnic groups have similar or different values and beliefs from your own. (Mark one for each item)

- |                                      | Very similar | Somewhat similar | Somewhat different | Very different |
|--------------------------------------|--------------|------------------|--------------------|----------------|
| a. African Americans/Blacks          | 1            | 2                | 3                  | 4              |
| b. Hispanics/Latinos/Chicanos        | 1            | 2                | 3                  | 4              |
| c. Asian Americans/Pacific Islanders | 1            | 2                | 3                  | 4              |
| d. Whites/Caucasians                 | 1            | 2                | 3                  | 4              |
| e. American Indians/Alaskan Natives  | 1            | 2                | 3                  | 4              |

24. Please rate your level of agreement or disagreement with the following statements: (Mark one for each item)

- |   | Strongly agree | Agree somewhat | Disagree somewhat | Strongly disagree |
|---|----------------|----------------|-------------------|-------------------|
| a. My individual rights are more important than policies for the common good                          | 1              | 2              | 3                 | 4                 |
| b. Some degree of inequality is necessary in a society that wants to be the best in the world         | 1              | 2              | 3                 | 4                 |
| c. Even if I do the best I can to help others, it won't change the way society operates               | 1              | 2              | 3                 | 4                 |
| d. People in my community are counting on me to do well in college                                    | 1              | 2              | 3                 | 4                 |
| e. If people were treated more equally we would have fewer problems in this country                   | 1              | 2              | 3                 | 4                 |
| f. I believe I can do things that can make a big difference in the lives of others                    | 1              | 2              | 3                 | 4                 |
| g. My vote doesn't count much in improving the leadership or policies for this country                | 1              | 2              | 3                 | 4                 |
| h. It is not really that big a problem if some people have more of a chance in life than others       | 1              | 2              | 3                 | 4                 |
| i. Social progress should be measured by how far the least among us are able to move economically     | 1              | 2              | 3                 | 4                 |
| j. I should be able to say whatever I want rather than having to abide by rules to be civil to others | 1              | 2              | 3                 | 4                 |
| k. I have an obligation to "give back" to the community   | 1              | 2              | 3                 | 4                 |
| l. There is little I can do to make the world a better place to live                                  | 1              | 2              | 3                 | 4                 |
| m. I often think about how my personal decisions affect the welfare of others                         | 1              | 2              | 3                 | 4                 |
| n. Elected officials are unable to resolve their differences for the good of the people               | 1              | 2              | 3                 | 4                 |

**IV. Attitudes and Beliefs (con't)**

25. Indicate the extent to which you agree or disagree with each statement. (Mark one for each item)

- |   | Strongly agree          | Agree somewhat          | Disagree somewhat       | Strongly disagree       |
|---|-------------------------|-------------------------|-------------------------|-------------------------|
| a. Racial/ethnic discrimination is no longer a major problem in the U.S.  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| b. It's fair to give preference in college admissions to children of alumni   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| c. Colleges should support women's athletics as much as they support men's athletics                                    | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| d. Our society has done enough to promote the welfare of different racial/ethnic groups                                 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| e. Hiring more faculty of color should be a top priority of this university   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| f. Colleges do not have a responsibility to correct racial/ethnic injustice   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| g. The system prevents people of color from getting their fair share of good jobs and better pay                        | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| h. Emphasizing diversity contributes to disunity on campus  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| i. State hate crime laws are needed to protect people from harassment based on race, gender or sexual orientation       | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| j. Colleges should aggressively recruit more students of color  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| k. A person's racial background in this society does not interfere with achieving everything he or she wants to achieve | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| l. Enhancing a student's ability to live in a multicultural society is part of a university's mission                   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| m. We need to stop emphasizing race and treat everybody the same  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| n. A high priority should be given to see that students of color receive financial aid for college                      | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

26. We are all members of different social identity groups (e.g., gender, race, ethnicity, sexual orientation, socio-economic class, etc.). How often do you think about your: (Mark one for each item)

- |                         | Often                   | Sometimes               | Rarely                  | Never                   |
|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| a. Gender               | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| b. Race                 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| c. Ethnicity            | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| d. Sexual orientation   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| e. Socio-economic class | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

27. Indicate the extent to which you agree or disagree with each statement. (Mark one for each item)

- |  | Strongly agree          | Agree somewhat          | Disagree somewhat       | Strongly disagree       |
|--|-------------------------|-------------------------|-------------------------|-------------------------|
| a. It is important for me to educate others about the social identity groups to which I belong                     | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| b. I often think about what I have in common with others in my racial/ethnic group                                 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| c. I like to learn about social identity groups different from my own  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| d. I would probably not be able to continue my friendship with a friend who I discovered was homosexual            | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| e. I think that what generally happens to people in my racial/ethnic group will affect what happens in my life     | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| f. I want to bridge differences between social identity groups   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| g. I am physically attracted to women  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| h. I feel proud when a member of my racial/ethnic group accomplishes something outstanding                         | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| i. If I found out someone I knew was gay, lesbian, or bisexual, I'd be accepting and supportive                    | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| j. Students with disabilities should not be given extra time to take tests   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| k. Immigrants should receive the same public services as U.S. citizens   | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| l. I am physically attracted to men  | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |
| m. Romantic relationships between people of the same gender are as acceptable as they are for heterosexual couples | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

**V. Demographic Information**

28. What is your gender? (Mark one)

- Male  Female

29. Which best describes your current living situation this academic year? (Mark one)

- With parents or relatives  
 Off-campus (not with family)  
 Residence hall  
 Fraternity or sorority  
 Other campus housing

30. What is your current marital status? (Mark one)

- Single, never married  Separated  
 Married  Divorced  
 Living with someone in a marriage-like relationship  Widowed

31. How do you identify yourself racially/ethnically? (Mark all that apply)

- a. African American/Black  
 b. Asian American/Pacific Islander (includes the Indian subcontinent)  
 c. American Indian/Alaskan Native  
 d. Hispanic/Latino/Chicano  
 e. White/Caucasian (not of Hispanic origin; persons having origins in Europe, North Africa, or the Middle East)

Continue on the next page





Your campus may have a page of additional questions. Follow instructions on the extra page and mark your answers here for each of the final set of questions provided by your campus.

- 32. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
- 33. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
- 34. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
- 35. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
- 36. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
- 37. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
- 38. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
- 39. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
- 40. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
- 41. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ



Thank you for participating! If you have any questions about the study, you may contact Sylvia Hurtado, Project Director, Center for the Study of Higher and Postsecondary Education, 2117 SEB, Ann Arbor MI, 48109-1259. © 2002



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## APPENDIX C

**Table C.1 2000 SAT I to ACT**

<b>Recentered SAT I Score Verbal + Math</b>	<b>ACT Composite Score</b>
1600	36
1560-1590	35
1510-1550	34
1460-1500	33
1410-1450	32
1360-1400	31
1320-1350	30
1280-1310	29
1240-1270	28
1210-1230	27
1170-1200	26
1130-1160	25
1090-1120	24
1060-1080	23
1020-1050	22
980-1010	21
940-970	20
900-930	19
860-890	18
810-850	17
760-800	16
710-750	15
660-700	14
590-650	13
520-580	12
500-510	11

[http://internationalcounselor.org/College%20program/concordance\\_between\\_act\\_composit.htm](http://internationalcounselor.org/College%20program/concordance_between_act_composit.htm)



**Table C.2 2000 ACT to SAT I**

<b>ACT Composite Score</b>	<b>Recentered SAT I Score Verbal + Math</b>
36	1600
35	1580
34	1520
33	1470
32	1420
31	1380
30	1340
29	1300
28	1260
27	1220
26	1180
25	1140
24	1110
23	1070
22	1030
21	990
20	950
19	910
18	870
17	830
16	780
15	740
14	680
13	620
12	560
11	500

[http://internationalcounselor.org/College%20program/concordance\\_between\\_act\\_composit.htm](http://internationalcounselor.org/College%20program/concordance_between_act_composit.htm)

## 2000 SAT I – ACT SCORE COMPARISONS

### Points to Note:

- Equivalent scores are those with the same percentile ranks for a common group of test takers.
- A concordance table is dependent upon the sample used to establish the relationship between two sets of scores. Other available SAT I - ACT tables use different samples of colleges and students than this table, resulting in slightly different equivalent scores. For this reason, the best concordance table is one that is established for and used by a specific institution.
- SAT I scores do not cover the full range of the ACT scale due to differences in how percentiles are distributed at the top and bottom of the two scales.
- Data are based on 103,525 test takers who took the both the SAT I and the ACT Assessment between October 1994 and December 1996.

Source reference, "Concordance Between ACT Assessment and Recentered SAT I Sum Scores" by N.J. Dorans, C.F. Lyu, M. Pommerich, and W.M. Houston (1997), *College and University*, 73, 24-31; "Concordance between SAT I and ACT Scores for Individual Students" by D. Schneider and N.J. Dorans, *Research Notes (RN-07)*, College Entrance Examination Board, New York: 1999; "Correspondences between ACT and SAT I Scores" by N.J. Dorans, *College Board Research Report 99-1*, College Entrance Examination Board, New York: 1999; *ETS Research Report 99-2*, Educational Testing Service, Princeton: 1999. If you would like to order copies, please send us an email.

**APPENDIX D**

**DESCRIPTIVE STATISTICS FOR VARIABLES IN THE MODEL**

**Table D.1 Descriptive Statistics for Variables in the Model for All Race Group (n=4403)**

<b>Variable Name</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Dependent Variables</b>		
Sense of common fate—Time 1	2.75	.70
Sense of common fate—Time 2	2.53	.65
Race centrality—Time 1	2.49	.90
Race centrality—Time 2	2.60	.89
Shared racial/ethnic values—Time 1	3.42	.75
Shared racial/ethnic values—Time 2	3.40	.70
<b>Independent Variables</b>		
<i>Student Background Characteristics</i>		
Composite SAT or converted ACT score	1170.46	165.74
Generation status in the U.S.	2.25	1.51
<i>Pre-College Socialization</i>		
Parental influence	2.47	.97
White pre-college environment	3.75	.95
Pre-college frequency of interactions	2.53	.59
Pre-college experience of discrimination	.169	.37
Predisposition to participate in diversity related experiences	2.30	.73
<i>Institutional Characteristics and Climate</i>		
Perception of negative climate for diversity	1.51	.53
Sense of belonging	2.97	.77
<i>College Interactions with Diverse and Same Race Peers</i>		
Positive quality of interactions	3.10	1.05
Negative quality of interactions	1.68	.69
Frequency of interactions	2.60	.51
Same race interactions	3.78	.54
<i>Co-curricular Experience</i>		
Participation in diversity co-curricular activities	1.65	.73
Participation in cultural organizations	.155	.36
Lived on-campus	.661	.37
<i>Curricular Experiences</i>		
Courses with diversity readings and materials	2.49	.92
Intensive dialogue	2.31	1.09
Service-learning	1.47	.74

**Table D.2 Descriptive Statistics for Variables in the Model for White Group (n=3051)**

<b>Variable Name</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Dependent Variables</b>		
Sense of common fate—Time 1	2.60	.68
Sense of common fate—Time 2	2.39	.62
Race centrality—Time 1	2.26	.83
Race centrality—Time 2	2.40	.84
Shared racial/ethnic values—Time 1	3.44	.74
Shared racial/ethnic values—Time 2	3.43	.68
<b>Independent Variables</b>		
<i>Student Background Characteristics</i>		
Composite SAT or converted ACT score	1190.47	153.14
Generation status in the U.S.	2.59	.93
<i>Pre-College Socialization</i>		
Parental influence	2.44	.96
White pre-college environment	4.05	.77
Pre-college frequency of interactions	2.44	.59
Pre-college experience of discrimination	.147	.35
Predisposition to participate in diversity related experiences	2.15	.68
<i>Institutional Characteristics and Climate</i>		
Perception of negative climate for diversity	1.45	.46
Sense of belonging	2.99	.77
<i>College Interactions with Diverse and Same Race Peers</i>		
Positive quality of interactions	3.01	1.04
Negative quality of interactions	1.60	.64
Frequency of interactions	2.57	.51
Same race interactions	3.93	.31
<i>Co-curricular Experience</i>		
Participation in diversity co-curricular activities	1.55	.63
Participation in cultural organizations	.078	.27
Lived on-campus	.684	.35
<i>Curricular Experiences</i>		
Courses with diversity readings and materials	2.51	.91
Intensive dialogue	2.32	1.08
Service-learning	1.46	.73

**Table D.3 Descriptive Statistics for Variables in the Model for Asian Pacific American Group (n=701)**

<b>Variable Name</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Dependent Variables</b>		
Sense of common fate—Time 1	3.06	.62
Sense of common fate—Time 2	2.81	.61
Race centrality—Time 1	3.06	.82
Race centrality—Time 2	3.11	.78
Shared racial/ethnic values—Time 1	3.39	.75
Shared racial/ethnic values—Time 2	3.36	.70
<b>Independent Variables</b>		
<i>Student Background Characteristics</i>		
Composite SAT or converted ACT score	1193.58	179.88
Generation status in the U.S.	1.04	1.06
<i>Pre-College Socialization</i>		
Parental influence	2.56	.95
White pre-college environment	3.20	.95
Pre-college frequency of interactions	2.62	.54
Pre-college experience of discrimination	.205	.40
Predisposition to participate in diversity related experiences	2.61	.73
<i>Institutional Characteristics and Climate</i>		
Perception of negative climate for diversity	1.66	.60
Sense of belonging	2.96	.69
<i>College Interactions with Diverse and Same Race Peers</i>		
Positive quality of interactions	3.32	1.03
Negative quality of interactions	1.86	.75
Frequency of interactions	2.55	.48
Same race interactions	3.53	.69
<i>Co-curricular Experience</i>		
Participation in diversity co-curricular activities	1.83	.84
Participation in cultural organizations	.340	.47
Lived on-campus	.645	.40
<i>Curricular Experiences</i>		
Courses with diversity readings and materials	2.33	.92
Intensive dialogue	2.16	1.10
Service-learning	1.47	.75

**Table D.4 Descriptive Statistics for Variables in the Model for Latino Group (n=378)**

<b>Variable Name</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Dependent Variables</b>		
Sense of common fate—Time 1	3.06	.60
Sense of common fate—Time 2	2.79	.60
Race centrality—Time 1	2.81	.90
Race centrality—Time 2	2.89	.88
Shared racial/ethnic values—Time 1	3.34	.82
Shared racial/ethnic values—Time 2	3.37	.76
<b>Independent Variables</b>		
<i>Student Background Characteristics</i>		
Composite SAT or converted ACT score	1048.19	161.57
Generation status in the U.S.	1.89	1.26
<i>Pre-College Socialization</i>		
Parental influence	2.61	1.02
White pre-college environment	3.02	1.01
Pre-college frequency of interactions	2.86	.52
Pre-college experience of discrimination	.209	.41
Predisposition to participate in diversity related experiences	2.55	.75
<i>Institutional Characteristics and Climate</i>		
Perception of negative climate for diversity	1.54	.58
Sense of belonging	2.95	.83
<i>College Interactions with Diverse and Same Race Peers</i>		
Positive quality of interactions	3.26	1.08
Negative quality of interactions	1.73	.76
Frequency of interactions	2.80	.47
Same race interactions	3.38	.79
<i>Co-curricular Experience</i>		
Participation in diversity co-curricular activities	1.76	.83
Participation in cultural organizations	.242	.43
Lived on-campus	.483	.42
<i>Curricular Experiences</i>		
Courses with diversity readings and materials	2.50	.93
Intensive dialogue	2.40	1.10
Service-learning	1.50	.83

**Table D.5 Descriptive Statistics for Variables in the Model for African American Group (n=223)**

<b>Variable Name</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Dependent Variables</b>		
Sense of common fate—Time 1	3.30	.50
Sense of common fate—Time 2	3.07	.50
Race centrality—Time 1	3.20	.77
Race centrality—Time 2	3.36	.69
Shared racial/ethnic values—Time 1	3.28	.85
Shared racial/ethnic values—Time 2	3.34	.79
<b>Independent Variables</b>		
<i>Student Background Characteristics</i>		
Composite SAT or converted ACT score	1049.29	136.09
Generation status in the U.S.	1.96	1.25
<i>Pre-College Socialization</i>		
Parental influence	2.37	1.02
White pre-college environment	2.75	.96
Pre-college frequency of interactions	2.78	.54
Pre-college experience of discrimination	.268	.44
Predisposition to participate in diversity related experiences	2.92	.65
<i>Institutional Characteristics and Climate</i>		
Perception of negative climate for diversity	1.89	.73
Sense of belonging	2.80	.75
<i>College Interactions with Diverse and Same Race Peers</i>		
Positive quality of interactions	3.28	.96
Negative quality of interactions	2.02	.78
Frequency of interactions	2.66	.45
Same race interactions	3.41	.79
<i>Co-curricular Experience</i>		
Participation in diversity co-curricular activities	2.29	.89
Participation in cultural organizations	.469	.50
Lived on-campus	.731	.36
<i>Curricular Experiences</i>		
Courses with diversity readings and materials	2.64	.93
Intensive dialogue	2.45	1.05
Service-learning	1.56	.78



**APPENDIX E**

**FACTOR LOADINGS AND RELIABILITIES FOR  
DEPENDENT AND INDEPENDENT VARIABLES**

**Table E.1 Factor Loadings and Reliabilities for Dependent and Independent Variables (All Race Group)**

Factor and Survey Items	Factor Loadings	Internal Consistency (Alpha)
<i>Pre-college sense of common fate</i> <sup>a</sup>		.717
I often think about what I have in common with others in my racial/ethnic group	.643	
It is important for me to educate others about the social identity groups to which I belong	.477	
I feel proud when a member of my racial/ethnic group accomplishes something outstanding	.324	
I think that what generally happens to people in my racial/ethnic group will affect what happens in my life	.200	
<i>Sense of common fate</i> <sup>a</sup>		.724
I often think about what I have in common with others in my racial/ethnic group	.640	
It is important for me to educate others about the social identity groups to which I belong	.482	
I feel proud when a member of my racial/ethnic group accomplishes something outstanding	.341	
I think that what generally happens to people in my racial/ethnic group will affect what happens in my life	.206	
<i>White pre-college environment</i> <sup>b</sup>		.849
Racial composition of high school graduated from	.686	
Racial composition of friends in high school	.707	
Racial composition of neighborhood grew up in	.573	
<i>Predisposition to participate in diversity related experiences</i> <sup>c</sup>		.702
Join an organization that promotes cultural diversity	.619	
Participate in groups and activities reflecting your own cultural-ethnic background	.383	
Take a course devoted to diversity issues in your first year of college	.360	
<i>Perception of negative climate for diversity</i> <sup>a</sup>		.545
I have been singled out in class because of my race/ethnicity, gender or sexual orientation	.342	
I have heard faculty express stereotypes about racial/ethnic groups in class	.243	
There is a lot of racial tension on the University campus	.290	
<i>Sense of belonging</i> <sup>a</sup>		.899
I feel that I am a member of the university community	.932	
I feel I have a sense of belonging to this university	.655	
I see myself as part of the university community	.676	

<sup>a</sup> Four-point Likert scale: From Strongly disagree=1 to Strongly agree=4.

<sup>b</sup> Five-point Likert scale: From All or nearly all people of color=1 to All or nearly all white=5.

<sup>c</sup> Four-point Likert scale: From Very unlikely=1 to Very likely=4.

<sup>d</sup> Five-point Likert scale: From Never=1 to Very often=5.

<sup>e</sup> Four-point Likert scale: From None=1 to Three or more=4.

**Table E.1 Factor Loadings and Reliabilities for Dependent and Independent Variables (All Race Group) (cont.)**

Factor and Survey Items	Factor Loadings	Internal Consistency (Alpha)
<i>Positive quality of interactions<sup>d</sup></i>		
Had meaningful and honest discussions about race/ethnic relations outside of class	.561	.829
Shared personal feelings and problems	.600	
Had intellectual discussions outside of class	.700	
<i>Negative quality of interactions<sup>d</sup></i>		
Had guarded, cautious interactions	.372	.698
Had tense, somewhat hostile interactions	.584	
Felt insulted or threatened based on my race or diversity	.378	
<i>Informal context of interactions<sup>d</sup></i>		
Dined or shared a meal	.528	.760
Studied or prepared for a class	.446	
Socialized or partied	.566	
Attended events sponsored by other racial/ethnic groups	.269	
<i>Participate in diversity co-curricular activities<sup>d</sup></i>		
Events or activities sponsored by groups reflecting your own cultural heritage	.187	.678
Campus organized discussions on racial/ethnic issues	.711	
Diversity awareness workshops	.617	
<i>Courses with diversity readings and materials<sup>e</sup></i>		
Material/readings on gender issues	.543	.843
Material/readings on issues of repression	.683	
Material/readings on race and ethnicity issues	.708	

<sup>a</sup> Four-point Likert scale: From Strongly disagree=1 to Strongly agree=4.

<sup>b</sup> Five-point Likert scale: From All or nearly all people of color=1 to All or nearly all white=5.

<sup>c</sup> Four-point Likert scale: From Very unlikely=1 to Very likely=4.

<sup>d</sup> Five-point Likert scale: From Never=1 to Very often=5.

<sup>e</sup> Four-point Likert scale: From None=1 to Three or more=4.

**Table E.2 Factor Loadings and Reliabilities for Dependent and Independent Variables**

Factor and Survey Items	White (n=3051)	Asian Pacific American (n=701)	Latino (n=378)	African American (n=223)
<i>Pre-college sense of common fate</i> <sup>a</sup>				
I often think about what I have in common with others in my racial/ethnic group	.625	.595	.690	.473
It is important for me to educate others about the social identity groups to which I belong	.452	.434	.509	.443
I feel proud when a member of my racial/ethnic group accomplishes something outstanding	.269	.361	.254	.188
I think that what generally happens to people in my racial/ethnic group will affect what happens in my life	.171	.265	.241	.149
<i>Sense of common fate</i> <sup>a</sup>				
I often think about what I have in common with others in my racial/ethnic group	.604	.562	.773	.553
It is important for me to educate others about the social identity groups to which I belong	.439	.507	.440	.638
I feel proud when a member of my racial/ethnic group accomplishes something outstanding	.288	.366	.255	.029
I think that what generally happens to people in my racial/ethnic group will affect what happens in my life	.196	.184	.206	.426
<i>White pre-college environment</i> <sup>b</sup>				
Racial composition of high school graduated from	.677	.631	.721	.560
Racial composition of friends in high school	.639	.557	.680	.766
Racial composition of neighborhood grew up in	.478	.493	.568	.329
<i>Predisposition to participate in diversity related experiences</i> <sup>c</sup>				
Join an organization that promotes cultural diversity	.538	.636	.708	.384
Participate in groups and activities reflecting your own cultural-ethnic background	.281	.532	.417	.321
Take a course devoted to diversity issues in your first year of college	.353	.373	.468	.410
<i>Perception of negative climate for diversity</i> <sup>a</sup>				
I have been singled out in class because of my race/ethnicity, gender or sexual orientation	.219	.462	.431	.466
I have heard faculty express stereotypes about racial/ethnic groups in class	.210	.243	.233	.385
There is a lot of racial tension on the University campus	.227	.358	.413	.472
<i>Sense of belonging</i> <sup>a</sup>				
I feel that I am a member of the university community	.947	.896	.873	.944
I feel I have a sense of belonging to this university	.661	.602	.681	.646
I see myself as part of the university community	.681	.618	.758	.614

<sup>a</sup> Four-point Likert scale: From Strongly disagree=1 to Strongly agree=4.

<sup>b</sup> Five-point Likert scale: From All or nearly all people of color=1 to All or nearly all white=5.

<sup>c</sup> Four-point Likert scale: From Very unlikely=1 to Very likely=4.

<sup>d</sup> Five-point Likert scale: From Never=1 to Very often=5.

<sup>e</sup> Four-point Likert scale: From None=1 to Three or more=4.

**Table E.2 Factor Loadings and Reliabilities for Dependent and Independent Variables (cont.)**

Factor and Survey Items	White (n=3051)	Asian Pacific American (n=701)	Latino (n=378)	African American (n=223)
<i>Positive quality of interactions</i> <sup>d</sup>	(.829)	(.815)	(.838)	(.806)
Had meaningful and honest discussions about race/ethnic relations outside of class	.536	.560	.652	.598
Shared personal feelings and problems	.620	.545	.568	.474
Had intellectual discussions outside of class	.709	.691	.6685	.700
<i>Negative quality of interactions</i> <sup>d</sup>	(.675)	(.720)	(.710)	(.700)
Had guarded, cautious interactions	.360	.360	.398	.343
Had tense, somewhat hostile interactions	.573	.589	.580	.586
Felt insulted or threatened based on my race or diversity	.328	.462	.420	.411
<i>Informal context of interactions</i> <sup>d</sup>	(.754)	(.754)	(.781)	(.687)
Dined or shared a meal	.499	.514	.597	.440
Studied or prepared for a class	.452	.436	.355	.209
Socialized or partied	.598	.601	.608	.684
Attended events sponsored by other racial/ethnic groups	.237	.245	.369	.212
<i>Participate in diversity co-curricular activities</i> <sup>d</sup>	(.607)	(.734)	(.768)	(.724)
Events or activities sponsored by groups reflecting your own cultural heritage	.112	.228	.341	.267
Campus organized discussions on racial/ethnic issues	.663	.806	.672	.737
Diversity awareness workshops	.569	.710	.715	.534
<i>Courses with diversity readings and materials</i> <sup>e</sup>	(.846)	(.838)	(.832)	(.835)
Material/readings on gender issues	.572	.509	.476	.467
Material/readings on issues of repression	.671	.652	.757	.724
Material/readings on race and ethnicity issues	.704	.755	.663	.726

<sup>a</sup> Four-point Likert scale: From Strongly disagree=1 to Strongly agree=4.

<sup>b</sup> Five-point Likert scale: From All or nearly all people of color=1 to All or nearly all white=5.

<sup>c</sup> Four-point Likert scale: From Very unlikely=1 to Very likely=4.

<sup>d</sup> Five-point Likert scale: From Never=1 to Very often=5.

<sup>e</sup> Four-point Likert scale: From None=1 to Three or more=4.

**APPENDIX F**  
**CORRELATION MATRICES FOR ALL RACE GROUP**  
**AND EACH RACIAL GROUP**

**Table F.1 Correlations Matrix for All Race Group (n=4403)**

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	
Sense of common fate--Time 1 (V1)	1.000***																			
Sense of common fate--Time 2 (V2)	0.494***	1.000***																		
Race centrality--Time 1 (V3)	0.427***	0.347***	1.000***																	
Race centrality--Time 2 (V4)	0.340***	0.486***	0.472***	1.000***																
Shared racial/ethnic values--Time 1 (V5)	-0.031*	-0.023	-0.063***	-0.054***	1.000***															
Shared racial/ethnic values--Time 2 (V6)	-0.042**	-0.012	-0.080***	-0.063***	0.378***	1.000***														
Female (V7)	0.019	0.076***	0.014	0.025*	0.089***	0.070***	1.000***													
Native American (V8)	0.027	0.027	0.024	-0.007	-0.022	-0.057***	0.023	1.000***												
African American (V9)	0.131***	0.176***	0.163***	0.182***	-0.036*	-0.019	0.021	-0.025	1.000***											
Asian Pacific American (V10)	0.188***	0.183***	0.261***	0.231***	-0.012	-0.024	-0.040**	-0.046***	-0.100**	1.000***										
Latino (V11)	0.108***	0.120***	0.101***	0.093***	-0.027*	-0.015	0.011	-0.033*	-0.071***	-0.133***	1.000***									
Low income (V12)	0.119***	0.110***	0.108***	0.067***	-0.034*	-0.032*	0.027	0.060**	0.069**	0.096**	0.066**	1.000***								
Middle income (V13)	0.071***	0.051**	0.068***	0.057***	0.005	-0.029	0.016	0.016	0.027	0.049**	0.100**	-0.158**	1.000***							
Upper-middle income (V14)	-0.064**	-0.044**	-0.049**	-0.040*	0.010	0.035*	-0.026	-0.009	-0.014	-0.055**	-0.058**	-0.144	-0.374***	1.000***						
Composite SAT score (V15)	-0.156***	-0.160***	-0.021	-0.039**	-0.017	-0.068***	-0.180***	-0.052***	-0.169***	0.061***	-0.226***	-0.122**	-0.150**	0.039*	1.000***					
Mother's education level--High school (V16)	0.125***	0.131***	0.120***	0.117***	-0.007	-0.019	-0.021	0.021	-0.020	0.229***	0.090**	0.217***	0.137***	-0.084***	-0.132***	1.000***				
Mother's education level--College (V17)	0.003	-0.023	-0.021	-0.019	0.015	0.024	0.063***	0.027	0.020	-0.034**	0.039**	0.042*	0.187***	0.031*	-0.137***	-0.191***	1.000***			
Generation status in the U.S. (V18)	-0.260**	-0.278***	-0.287***	-0.240***	0.084**	0.093**	0.045*	0.030*	-0.057***	-0.457***	-0.097**	-0.127***	-0.059**	0.162**	0.043*	-0.217***	0.080**	1.000***		
Parental influence (V19)	0.148***	0.113**	0.086***	0.060**	-0.005	0.037*	0.018	-0.019	-0.022	0.039*	0.045**	-0.005	0.022	-0.015	-0.139***	0.062**	-0.004**	-0.071**	1.000***	

**Table F.1 Correlations Matrix for All Race Group (n=4403) (cont.)**

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19
White pre-college environment (V20)	-0.230***	-0.236***	-0.252***	-0.249***	0.071***	0.079***	0.010	-0.057***	-0.241***	-0.250***	-0.230***	-0.199***	-0.124***	0.067***	0.161***	-0.225***	-0.019	0.297***	-0.042***
Pre-college frequency of interaction (V21)	0.095***	0.088***	0.158***	0.128***	-0.069***	-0.069***	0.031*	0.082***	0.098***	0.069***	0.168***	0.030***	0.036*	-0.045**	-0.039**	0.050***	-0.044**	-0.058***	0.000
Pre-college experience of discrimination (V22)	0.122***	0.106***	0.184***	0.125***	-0.021	-0.037**	0.066***	0.029*	0.061***	0.042**	0.033*	0.019*	0.030*	-0.015	-0.035*	0.035*	-0.009	-0.054***	0.040**
Predisposition to participate in diversity related experiences (V23)	0.425***	0.366***	0.317***	0.315***	-0.030*	-0.047**	0.126**	0.046**	0.185***	0.179***	0.100***	0.100***	0.033*	-0.046**	-0.024	0.089***	-0.046**	-0.212***	0.020
Moderate structural diversity (V24)	-0.018	-0.004	0.008	-0.003	0.084***	0.067***	0.022	-0.020	0.011	-0.050**	-0.031*	-0.053**	-0.053**	-0.004	0.080***	-0.022	-0.016	0.107***	-0.012
Low structural diversity (V25)	-0.010	-0.047**	-0.100***	-0.084***	0.053***	0.056***	0.072***	-0.033*	-0.050***	-0.109***	-0.118***	0.014	0.062***	0.020	-0.234***	-0.008	0.076**	0.084***	0.008
Perception of negative climate for diversity (V26)	0.184***	0.241***	0.195**	0.269***	-0.020	-0.070**	0.024	0.016	0.167***	0.117***	0.018	0.075***	0.041**	-0.042**	-0.026	0.071***	-0.042**	-0.121***	0.010
Sense of belonging (V27)	0.042**	0.086***	-0.040**	0.001	0.054***	0.089***	0.057***	-0.010	-0.049**	-0.009	-0.011	-0.036**	-0.081***	0.032*	0.097***	-0.032*	-0.050*	0.032*	0.023
Positive quality of interactions (V28)	0.071***	0.153***	0.081**	0.147***	-0.029	-0.020	0.070**	0.012	0.088**	0.082**	0.045**	0.004	-0.016	-0.024	0.060**	-0.032*	-0.040**	-0.053***	0.003
Negative quality of interactions (V29)	0.147***	0.207***	0.175***	0.248***	-0.038**	-0.038**	-0.054***	0.006	0.106***	0.111***	0.021	0.018	0.028	-0.032*	-0.013	0.054***	-0.053***	-0.103***	0.033
Frequency of interactions (V30)	-0.006	0.060***	0.014	0.059***	-0.034**	-0.021	0.041**	0.087***	0.029	-0.039**	0.120***	-0.008	0.012	0.002	-0.005	-0.033*	-0.001	0.056*	-0.014
Same race interactions (V31)	-0.126***	-0.097***	-0.139***	-0.118***	0.199***	0.270***	0.064**	-0.179***	-0.148**	-0.190***	-0.219***	-0.092***	-0.070**	0.050**	0.073***	-0.102***	-0.030*	0.253***	0.002
Informal context of interactions (V32)	0.079***	0.140***	0.091**	0.131***	-0.008	0.017	0.056**	0.024	0.063**	0.116**	0.059***	-0.003	-0.023	-0.018	0.031*	-0.028	-0.038*	-0.067***	-0.009
Participation in diversity co-curricular activities (V33)	0.222***	0.315***	0.157**	0.241***	-0.013	-0.002	0.053**	0.004	0.155***	0.067**	0.027	0.053***	0.000	-0.010	-0.046**	0.052***	-0.041**	-0.121***	0.045**
Participation in cultural organizations (V34)	0.290***	0.334***	0.269**	0.283***	-0.045**	-0.029	0.021	0.018	0.200***	0.223***	0.073***	0.104***	0.041**	-0.065***	-0.038**	0.085***	-0.026	-0.276***	0.048***
Lived on-campus (V35)	-0.009***	-0.003	-0.020	0.009	-0.014	-0.003	0.001	-0.047**	0.043**	-0.019	-0.146***	-0.044**	-0.090**	0.035*	0.225***	-0.076**	-0.050**	0.023	-0.104
Courses with diversity readings and materials (V36)	0.030***	0.071***	0.003**	0.097***	0.062**	0.052	0.123**	0.014	0.033**	-0.071**	-0.009	-0.023	-0.011	0.013	-0.016	-0.044**	0.000	0.089***	-0.008
Courses with intensive dialogue (V37)	0.049***	0.082***	0.031*	0.072***	0.011	0.023	0.067***	-0.006	0.084**	-0.070**	0.021	-0.004	0.002	-0.009	0.027	-0.016	-0.005	0.060**	0.002
Courses with service-learning (V38)	0.071***	0.101***	0.037**	0.072***	0.005	0.027	0.036*	-0.003	0.080**	-0.003	-0.022	-0.022	-0.010	-0.005	-0.018	0.007	-0.034*	-0.013	0.055***



**Table F.1 Correlations Matrix for All Race Group (n=4403) (cont.)**

	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	V31	V32	V33	V34	V35	V36	V37	V38		
White pre-college environment (V20)	1.000 <sup>***</sup>																				
Pre-college frequency of interaction (V21)	-0.408 <sup>***</sup>	1.000 <sup>***</sup>																			
Pre-college experience of discrimination (V22)	-0.095 <sup>***</sup>	0.142 <sup>***</sup>	1.000 <sup>***</sup>																		
Predisposition to participate in diversity related experiences (V23)	-0.228 <sup>***</sup>	0.176 <sup>***</sup>	0.120 <sup>***</sup>	1.000 <sup>***</sup>																	
Moderate structural diversity (V24)	0.100 <sup>***</sup>	-0.048 <sup>***</sup>	0.019	-0.001	1.000 <sup>***</sup>																
Low structural diversity (V25)	0.242 <sup>***</sup>	-0.163 <sup>***</sup>	-0.035 <sup>*</sup>	-0.025	-0.384 <sup>***</sup>	1.000 <sup>***</sup>															
Perception of negative climate for diversity (V26)	-0.150 <sup>***</sup>	0.111 <sup>***</sup>	0.178 <sup>***</sup>	0.236 <sup>***</sup>	0.062 <sup>***</sup>	-0.053 <sup>***</sup>	1.000 <sup>***</sup>														
Sense of belonging (V27)	0.063 <sup>***</sup>	-0.015	-0.054 <sup>***</sup>	0.049 <sup>**</sup>	0.041 <sup>**</sup>	-0.042 <sup>**</sup>	-0.101 <sup>***</sup>	1.000 <sup>***</sup>													
Positive quality of interactions (V28)	-0.098 <sup>***</sup>	0.242 <sup>***</sup>	0.081 <sup>***</sup>	0.217 <sup>***</sup>	0.003	-0.094 <sup>***</sup>	0.115 <sup>***</sup>	0.171 <sup>***</sup>	1.000 <sup>***</sup>												
Negative quality of interactions (V29)	-0.113 <sup>***</sup>	0.092 <sup>**</sup>	0.157 <sup>***</sup>	0.170 <sup>***</sup>	0.004	-0.057 <sup>***</sup>	0.400 <sup>***</sup>	-0.076 <sup>***</sup>	0.300 <sup>***</sup>	1.000 <sup>***</sup>											
Frequency of interactions (V30)	-0.118 <sup>***</sup>	0.329 <sup>***</sup>	0.070 <sup>**</sup>	0.074 <sup>***</sup>	0.011	-0.135 <sup>***</sup>	0.045 <sup>**</sup>	0.128 <sup>***</sup>	0.355 <sup>***</sup>	0.083 <sup>***</sup>	1.000 <sup>***</sup>										
Same race interactions (V31)	0.193 <sup>***</sup>	-0.108 <sup>***</sup>	-0.009	-0.067 <sup>***</sup>	0.033 <sup>*</sup>	0.106 <sup>***</sup>	-0.071 <sup>***</sup>	0.114 <sup>***</sup>	0.021	-0.066 <sup>***</sup>	0.038 <sup>**</sup>	1.000 <sup>***</sup>									
Informal context of interactions (V32)	-0.116 <sup>***</sup>	0.246 <sup>***</sup>	0.069 <sup>**</sup>	0.203 <sup>***</sup>	0.011	-0.111 <sup>***</sup>	0.083 <sup>***</sup>	0.206 <sup>***</sup>	0.782 <sup>***</sup>	0.239 <sup>***</sup>	0.390 <sup>***</sup>	0.008	1.000 <sup>***</sup>								
Participation in diversity co-curricular activities (V33)	-0.123 <sup>***</sup>	0.111 <sup>***</sup>	0.087 <sup>***</sup>	0.361 <sup>***</sup>	0.030 <sup>*</sup>	0.013	0.285 <sup>***</sup>	0.108 <sup>***</sup>	0.283 <sup>***</sup>	0.236 <sup>***</sup>	0.144 <sup>***</sup>	0.024	0.262 <sup>**</sup>	1.000 <sup>***</sup>							
Participation in cultural organizations (V34)	-0.236 <sup>***</sup>	0.079 <sup>**</sup>	0.077 <sup>**</sup>	0.367 <sup>***</sup>	0.011	-0.066 <sup>***</sup>	0.183 <sup>***</sup>	0.016	0.099 <sup>***</sup>	0.175 <sup>***</sup>	0.004	-0.055 <sup>***</sup>	0.111 <sup>***</sup>	0.319 <sup>***</sup>	1.000 <sup>***</sup>						
Lived on-campus (V35)	0.131 <sup>***</sup>	-0.124 <sup>***</sup>	-0.064 <sup>***</sup>	0.078 <sup>***</sup>	-0.057 <sup>***</sup>	0.172 <sup>***</sup>	0.021	0.149 <sup>***</sup>	0.048 <sup>**</sup>	0.020	-0.020	0.069 <sup>***</sup>	0.071 <sup>***</sup>	0.069 <sup>***</sup>	0.030 <sup>*</sup>	1.000 <sup>***</sup>					
Courses with diversity readings and materials (V36)	0.052 <sup>***</sup>	0.040 <sup>***</sup>	0.022 <sup>**</sup>	0.079 <sup>***</sup>	-0.007	0.069 <sup>***</sup>	0.052 <sup>***</sup>	0.097 <sup>***</sup>	0.103 <sup>***</sup>	0.011 <sup>***</sup>	0.090 <sup>***</sup>	0.087 <sup>***</sup>	0.072 <sup>**</sup>	0.107 <sup>***</sup>	-0.010 <sup>*</sup>	0.029 <sup>***</sup>	1.000 <sup>***</sup>				
Courses with intensive dialogue (V37)	-0.028	0.123 <sup>***</sup>	0.043 <sup>**</sup>	0.102 <sup>***</sup>	-0.012	0.015	0.081 <sup>**</sup>	0.113 <sup>***</sup>	0.203 <sup>***</sup>	0.064 <sup>**</sup>	0.163 <sup>***</sup>	0.082 <sup>***</sup>	0.160 <sup>***</sup>	0.170 <sup>***</sup>	-0.012	0.012	0.402 <sup>***</sup>	1.000 <sup>***</sup>			
Courses with service-learning (V38)	0.010	0.036 <sup>**</sup>	0.033 <sup>*</sup>	0.101 <sup>***</sup>	-0.081 <sup>***</sup>	0.032 <sup>*</sup>	0.098 <sup>***</sup>	0.089 <sup>***</sup>	0.117 <sup>***</sup>	0.099 <sup>***</sup>	0.058 <sup>***</sup>	0.018	0.106 <sup>***</sup>	0.229 <sup>***</sup>	0.025	0.023	0.194 <sup>***</sup>	0.228 <sup>***</sup>	1.000 <sup>***</sup>		

**Table F.2 Correlations Matrix for White Student Group (n=3051)**

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
Sense of common fate--Time 1 (V1)	1.000 <sup>***</sup>														
Sense of common fate--Time 2 (V2)	0.441 <sup>***</sup>	1.000 <sup>***</sup>													
Race centrality--Time 1 (V3)	0.321 <sup>***</sup>	0.243 <sup>***</sup>	1.000 <sup>***</sup>												
Race centrality--Time 2 (V4)	0.234 <sup>***</sup>	0.399 <sup>***</sup>	0.399 <sup>***</sup>	1.000 <sup>***</sup>											
Shared racial/ethnic values--Time 1 (V5)	-0.097 <sup>***</sup>	-0.080 <sup>***</sup>	-0.141 <sup>***</sup>	-0.121 <sup>***</sup>	1.000 <sup>***</sup>										
Shared racial/ethnic values--Time 2 (V6)	-0.089 <sup>***</sup>	-0.087 <sup>***</sup>	-0.145 <sup>***</sup>	-0.138 <sup>***</sup>	0.329 <sup>***</sup>	1.000 <sup>***</sup>									
Female (V7)	0.004	0.064 <sup>***</sup>	0.001	0.004	0.090 <sup>***</sup>	0.050 <sup>**</sup>	1.000 <sup>***</sup>								
Converted SAT score (V8)	-0.115 <sup>***</sup>	-0.089 <sup>***</sup>	0.074 <sup>***</sup>	0.051 <sup>**</sup>	-0.009	-0.065 <sup>***</sup>	-0.186 <sup>***</sup>	1.000 <sup>***</sup>							
Mother's level of education--High School (V9)	0.076 <sup>***</sup>	0.076 <sup>***</sup>	0.030	0.043 <sup>*</sup>	-0.109 <sup>***</sup>	-0.094 <sup>***</sup>	-0.014	-0.024	1.000 <sup>***</sup>						
Mother's level of education--College (V10)	-0.016	-0.044 <sup>**</sup>	-0.039 <sup>*</sup>	-0.039 <sup>*</sup>	0.008	0.022	0.051 <sup>**</sup>	-0.140 <sup>***</sup>	-0.114 <sup>***</sup>	1.000 <sup>***</sup>					
Generation status in the U.S. (V11)	-0.119 <sup>***</sup>	-0.161 <sup>***</sup>	-0.133 <sup>***</sup>	-0.107 <sup>***</sup>	0.151 <sup>**</sup>	0.170 <sup>***</sup>	0.046 <sup>**</sup>	-0.041 <sup>*</sup>	-0.089 <sup>***</sup>	0.099 <sup>***</sup>	1.000 <sup>***</sup>				
Parental influence (V12)	0.124 <sup>***</sup>	0.090 <sup>***</sup>	0.068 <sup>***</sup>	0.060 <sup>***</sup>	-0.031 <sup>***</sup>	0.006	0.015	-0.126 <sup>***</sup>	0.033	0.000	-0.038 <sup>**</sup>	1.000 <sup>***</sup>			
White pre-college environment (V13)	-0.113 <sup>***</sup>	-0.092 <sup>***</sup>	-0.144 <sup>***</sup>	-0.136 <sup>***</sup>	0.167 <sup>***</sup>	0.180 <sup>***</sup>	0.023	0.004	-0.117 <sup>***</sup>	0.007 <sup>***</sup>	0.161 <sup>***</sup>	-0.016	1.000 <sup>***</sup>		
Pre-college frequency of interactions (V14)	0.045 <sup>**</sup>	0.027	0.121 <sup>***</sup>	0.096 <sup>***</sup>	-0.054 <sup>***</sup>	-0.053 <sup>**</sup>	0.038 <sup>*</sup>	0.035 <sup>*</sup>	0.032	-0.050	-0.035 <sup>*</sup>	-0.005	-0.516 <sup>***</sup>	1.000 <sup>***</sup>	
Pre-college experience of discrimination (V15)	0.087 <sup>***</sup>	0.068 <sup>***</sup>	0.158 <sup>***</sup>	0.090 <sup>***</sup>	-0.068 <sup>***</sup>	-0.073 <sup>***</sup>	0.039 <sup>*</sup>	-0.017	0.019	-0.019	-0.053 <sup>**</sup>	0.037 <sup>*</sup>	-0.118 <sup>***</sup>	0.124 <sup>***</sup>	1.000 <sup>***</sup>

**Table F.2 Correlations Matrix for White Student Group (n=3051) (cont.)**

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
Predisposition to participate in diversity related experiences (V16)	0.349 <sup>***</sup>	0.269 <sup>***</sup>	0.216 <sup>***</sup>	0.231 <sup>***</sup>	-0.089 <sup>***</sup>	-0.116 <sup>***</sup>	0.131 <sup>***</sup>	0.070 <sup>***</sup>	0.042 <sup>***</sup>	-0.084 <sup>***</sup>	-0.070 <sup>***</sup>	-0.025 <sup>***</sup>	-0.123 <sup>***</sup>	0.121 <sup>***</sup>	0.082 <sup>***</sup>
Moderate structural diversity (V17)	-0.010	0.002	0.013	-0.008	0.075 <sup>***</sup>	0.056 <sup>***</sup>	0.011	0.070 <sup>***</sup>	-0.023	-0.010	0.116 <sup>***</sup>	0.004	0.076 <sup>***</sup>	-0.029	0.012
Low structural diversity (V18)	0.019	-0.025	-0.076 <sup>***</sup>	-0.071 <sup>***</sup>	0.033	0.043 <sup>†</sup>	0.077 <sup>***</sup>	-0.276 <sup>***</sup>	-0.012	0.082 <sup>***</sup>	0.066 <sup>***</sup>	0.009	0.239 <sup>***</sup>	-0.151 <sup>***</sup>	-0.035
Perception of negative climate for diversity (V19)	0.111 <sup>***</sup>	0.180 <sup>***</sup>	0.117 <sup>***</sup>	0.208 <sup>***</sup>	-0.053 <sup>***</sup>	-0.120 <sup>***</sup>	0.021	0.065 <sup>***</sup>	0.013	-0.068 <sup>***</sup>	-0.062 <sup>***</sup>	0.000	-0.083 <sup>***</sup>	0.095 <sup>***</sup>	0.135 <sup>***</sup>
Sense of belonging (V20)	0.082 <sup>***</sup>	0.119 <sup>***</sup>	-0.014	0.033	0.078 <sup>***</sup>	0.109 <sup>***</sup>	0.060 <sup>***</sup>	0.082 <sup>***</sup>	-0.005	-0.072 <sup>***</sup>	0.030	0.013	0.024	-0.003	-0.045
Positive quality of interactions (V21)	0.034	0.130 <sup>***</sup>	0.040 <sup>†</sup>	0.123 <sup>***</sup>	-0.031	-0.031	0.066 <sup>***</sup>	0.064 <sup>***</sup>	0.001	-0.059 <sup>***</sup>	-0.023	0.002	-0.145 <sup>***</sup>	0.235 <sup>***</sup>	0.093 <sup>***</sup>
Negative quality of interactions (V22)	0.101 <sup>***</sup>	0.157 <sup>***</sup>	0.135 <sup>***</sup>	0.199 <sup>***</sup>	-0.074 <sup>***</sup>	-0.073 <sup>***</sup>	-0.075 <sup>***</sup>	0.048 <sup>***</sup>	0.016	-0.073 <sup>***</sup>	-0.062 <sup>***</sup>	0.025	-0.075 <sup>***</sup>	0.072 <sup>***</sup>	0.150 <sup>***</sup>
Frequency of interactions (V23)	-0.013	0.053 <sup>***</sup>	0.013	0.072 <sup>***</sup>	-0.007	-0.002	0.049 <sup>***</sup>	0.037 <sup>***</sup>	-0.027	-0.003	0.015	-0.016	-0.153 <sup>***</sup>	0.294 <sup>***</sup>	0.054 <sup>***</sup>
Same race interactions (V24)	-0.078 <sup>***</sup>	-0.087 <sup>***</sup>	-0.091 <sup>***</sup>	-0.076 <sup>***</sup>	0.212 <sup>***</sup>	0.260 <sup>***</sup>	0.086 <sup>***</sup>	-0.030	-0.107 <sup>***</sup>	-0.012	0.180 <sup>***</sup>	-0.023	0.234 <sup>***</sup>	-0.022	0.024
Participation in diversity co-curricular activities (V25)	0.186 <sup>***</sup>	0.246 <sup>***</sup>	0.097 <sup>***</sup>	0.188 <sup>***</sup>	-0.067 <sup>***</sup>	-0.071 <sup>***</sup>	0.027	0.042 <sup>***</sup>	0.015	-0.059 <sup>***</sup>	-0.058 <sup>***</sup>	0.026	-0.049 <sup>***</sup>	0.078 <sup>***</sup>	0.063 <sup>***</sup>
Participation in cultural organizations (V26)	0.219 <sup>***</sup>	0.244 <sup>***</sup>	0.180 <sup>***</sup>	0.187 <sup>***</sup>	-0.114 <sup>***</sup>	-0.110 <sup>***</sup>	-0.021	0.047 <sup>***</sup>	0.024	-0.046 <sup>***</sup>	-0.151 <sup>***</sup>	0.021	-0.095 <sup>***</sup>	0.048 <sup>***</sup>	0.047 <sup>***</sup>
Lived on-campus (V27)	0.035 <sup>†</sup>	0.036 <sup>†</sup>	0.017	0.044 <sup>†</sup>	-0.009	0.018	-0.001	0.184 <sup>***</sup>	-0.021	-0.047 <sup>***</sup>	-0.003	-0.075 <sup>***</sup>	0.114 <sup>***</sup>	-0.121 <sup>***</sup>	-0.060 <sup>***</sup>
Courses with diversity readings and materials (V28)	0.022 <sup>†</sup>	0.068 <sup>***</sup>	0.009 <sup>***</sup>	0.102 <sup>***</sup>	0.076	0.032	0.132 <sup>***</sup>	-0.030	0.004	0.000	0.053 <sup>***</sup>	-0.022	0.036	0.034 <sup>***</sup>	0.019 <sup>***</sup>
Courses with intensive dialogue (V29)	0.057 <sup>***</sup>	0.091 <sup>***</sup>	0.031	0.083 <sup>***</sup>	0.001	-0.005	0.060 <sup>***</sup>	0.028	0.003	-0.004	0.013	-0.009	-0.052 <sup>***</sup>	0.123 <sup>***</sup>	0.035 <sup>†</sup>
Courses with service-learning (V30)	0.085 <sup>***</sup>	0.110 <sup>***</sup>	0.046 <sup>***</sup>	0.087 <sup>***</sup>	0.014	0.017	0.026	-0.036 <sup>†</sup>	0.012	-0.023	-0.044 <sup>†</sup>	0.059 <sup>***</sup>	0.019	0.016	0.044 <sup>†</sup>

**Table F.2 Correlations Matrix for White Student Group (n=3051) (cont.)**

	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
Predisposition to participate in diversity related experiences (V16)	1.000 <sup>***</sup>														
Moderate structural diversity (V17)	0.026	1.000 <sup>***</sup>													
Low structural diversity (V18)	-0.011	-0.458 <sup>***</sup>	1.000 <sup>***</sup>												
Perception of negative climate for diversity (V19)	0.186 <sup>***</sup>	0.043 <sup>**</sup>	-0.077 <sup>***</sup>	1.000 <sup>***</sup>											
Sense of belonging (V20)	0.067 <sup>***</sup>	0.054 <sup>**</sup>	-0.053 <sup>**</sup>	-0.064 <sup>***</sup>	1.000 <sup>***</sup>										
Positive quality of interactions (V21)	0.183 <sup>***</sup>	0.014	-0.095 <sup>***</sup>	0.111 <sup>***</sup>	0.166 <sup>***</sup>	1.000 <sup>***</sup>									
Negative quality of interactions (V22)	0.094 <sup>***</sup>	0.005	-0.094 <sup>***</sup>	0.362 <sup>***</sup>	-0.032	0.303 <sup>***</sup>	1.000 <sup>***</sup>								
Frequency of interactions (V23)	0.062 <sup>***</sup>	0.025	-0.152 <sup>***</sup>	0.060	0.123 <sup>***</sup>	0.363 <sup>***</sup>	0.099 <sup>***</sup>	1.000 <sup>***</sup>							
Same race interactions (V24)	-0.012	0.054 <sup>**</sup>	0.054 <sup>**</sup>	-0.047	0.115 <sup>**</sup>	0.045 <sup>*</sup>	-0.060 <sup>**</sup>	0.061 <sup>***</sup>	1.000 <sup>***</sup>						
Participation in diversity co-curricular activities (V25)	0.304 <sup>***</sup>	0.007	0.011	0.244	0.143 <sup>***</sup>	0.284 <sup>***</sup>	0.200 <sup>***</sup>	0.144 <sup>***</sup>	-0.016	1.000 <sup>***</sup>					
Participation in cultural organizations (V26)	0.244 <sup>***</sup>	0.037 <sup>*</sup>	-0.098 <sup>***</sup>	0.145	0.033	0.081 <sup>***</sup>	0.161 <sup>***</sup>	-0.002	-0.083 <sup>***</sup>	0.226 <sup>***</sup>	1.000 <sup>***</sup>				
Lived on-campus (V27)	0.090 <sup>***</sup>	-0.117 <sup>***</sup>	0.187 <sup>***</sup>	-0.005	0.159 <sup>***</sup>	0.047 <sup>**</sup>	0.007	-0.015	0.014	0.074 <sup>***</sup>	0.016	1.000 <sup>***</sup>			
Courses with diversity readings and materials (V28)	0.100 <sup>***</sup>	-0.005	0.072 <sup>***</sup>	0.074	0.087 <sup>***</sup>	0.092 <sup>***</sup>	0.011 <sup>**</sup>	0.057 <sup>***</sup>	0.076 <sup>***</sup>	0.114 <sup>***</sup>	-0.014	0.007 <sup>**</sup>	1.000 <sup>***</sup>		
Courses with intensive dialogue (V29)	0.113 <sup>***</sup>	-0.019	0.006	0.089	0.107 <sup>***</sup>	0.202 <sup>***</sup>	0.069 <sup>***</sup>	0.139 <sup>***</sup>	0.053 <sup>**</sup>	0.175 <sup>***</sup>	-0.009	-0.028	0.382 <sup>***</sup>	1.000 <sup>***</sup>	
Courses with service-learning (V30)	0.108 <sup>***</sup>	-0.092 <sup>***</sup>	0.030	0.106	0.092 <sup>***</sup>	0.109 <sup>***</sup>	0.109 <sup>***</sup>	0.042 <sup>**</sup>	0.016	0.233 <sup>***</sup>	0.026	0.012	0.199 <sup>***</sup>	0.225 <sup>***</sup>	1.000 <sup>***</sup>

**Table F.3 Correlations Matrix for Asian Pacific American Student Group (n=701)**

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
Sense of common fate--Time 1 (V1)	1.000 <sup>***</sup>														
Sense of common fate--Time 2 (V2)	0.502 <sup>***</sup>	1.000 <sup>***</sup>													
Race centrality--Time 1 (V3)	0.435 <sup>***</sup>	0.313 <sup>***</sup>	1.000 <sup>***</sup>												
Race centrality--Time 2 (V4)	0.339 <sup>***</sup>	0.472 <sup>***</sup>	0.393 <sup>***</sup>	1.000 <sup>***</sup>											
Shared racial/ethnic values--Time 1 (V5)	0.187 <sup>***</sup>	0.155 <sup>***</sup>	0.217 <sup>***</sup>	0.089 <sup>†</sup>	1.000 <sup>***</sup>										
Shared racial/ethnic values--Time 2 (V6)	0.147 <sup>***</sup>	0.216 <sup>***</sup>	0.137 <sup>***</sup>	0.074	0.384 <sup>***</sup>	1.000 <sup>***</sup>									
Female (V7)	0.109 <sup>**</sup>	0.144 <sup>***</sup>	0.065	0.062	0.087 <sup>†</sup>	0.129 <sup>***</sup>	1.000 <sup>***</sup>								
Converted SAT score (V8)	-0.112 <sup>**</sup>	-0.128 <sup>***</sup>	-0.038	-0.056	-0.083 <sup>†</sup>	-0.127 <sup>***</sup>	-0.211 <sup>***</sup>	1.000 <sup>***</sup>							
Mother's level of education--High School (V9)	0.042	0.108 <sup>**</sup>	0.063	0.036	0.152 <sup>***</sup>	0.086 <sup>†</sup>	-0.037	-0.290 <sup>***</sup>	1.000 <sup>***</sup>						
Mother's level of education--College (V10)	0.021	-0.027	0.021	0.029	-0.042	0.026	0.065	-0.116 <sup>**</sup>	-0.334 <sup>***</sup>	1.000 <sup>***</sup>					
Generation status in the U.S. (V11)	-0.288 <sup>***</sup>	-0.280 <sup>***</sup>	-0.208 <sup>***</sup>	-0.155 <sup>***</sup>	-0.221 <sup>***</sup>	-0.226 <sup>***</sup>	-0.082 <sup>†</sup>	0.212 <sup>***</sup>	-0.143 <sup>***</sup>	-0.052	1.000 <sup>***</sup>				
Parental influence (V12)	0.242 <sup>***</sup>	0.188 <sup>***</sup>	0.136 <sup>***</sup>	0.058	0.082 <sup>†</sup>	0.112 <sup>**</sup>	0.076 <sup>†</sup>	-0.130 <sup>***</sup>	0.094 <sup>**</sup>	-0.021	-0.093 <sup>**</sup>	1.000 <sup>***</sup>			
White pre-college environment (V13)	-0.095 <sup>†</sup>	-0.078 <sup>†</sup>	-0.017	-0.015	-0.113 <sup>***</sup>	-0.145 <sup>***</sup>	-0.059	0.111 <sup>**</sup>	-0.220 <sup>***</sup>	-0.019	0.147 <sup>***</sup>	-0.035	1.000 <sup>***</sup>		
Pre-college frequency of interactions (V14)	-0.022	-0.015	0.013	0.029	-0.101 <sup>**</sup>	-0.123 <sup>***</sup>	0.053	-0.020	0.007	-0.104 <sup>**</sup>	0.246 <sup>***</sup>	-0.044	-0.033	1.000 <sup>***</sup>	
Pre-college experience of discrimination (V15)	0.102 <sup>**</sup>	0.108 <sup>**</sup>	0.167 <sup>***</sup>	0.133 <sup>***</sup>	0.063	0.010	0.129 <sup>***</sup>	-0.041	0.035	-0.050	0.007	0.071	0.046	0.144 <sup>**</sup>	1.000 <sup>***</sup>

**Table F.3 Correlations Matrix for Asian Pacific American Student Group (n=701) (cont.)**

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
Predisposition to participate in diversity related experiences (V16)	0.457 <sup>***</sup>	0.386 <sup>***</sup>	0.267 <sup>***</sup>	0.205 <sup>***</sup>	0.120 <sup>***</sup>	0.100 <sup>***</sup>	0.181 <sup>***</sup>	-0.021	0.026	-0.008	-0.145 <sup>***</sup>	0.099 <sup>**</sup>	-0.046	0.127 <sup>**</sup>	0.087 <sup>*</sup>
Moderate structural diversity (V17)	0.075 <sup>*</sup>	0.055	0.086 <sup>*</sup>	0.095 <sup>**</sup>	0.109 <sup>***</sup>	0.138 <sup>***</sup>	0.091 <sup>**</sup>	0.083 <sup>*</sup>	-0.026	-0.040	-0.067	0.004	0.066 <sup>*</sup>	-0.077 <sup>*</sup>	0.039
Low structural diversity (V18)	0.109 <sup>**</sup>	0.114 <sup>***</sup>	0.039	0.076 <sup>*</sup>	0.080 <sup>*</sup>	0.066	0.067	-0.451 <sup>***</sup>	0.181 <sup>***</sup>	0.106 <sup>**</sup>	-0.174 <sup>***</sup>	0.047	0.080 <sup>*</sup>	-0.037	0.007
Perception of negative climate for diversity (V19)	0.132 <sup>***</sup>	0.179 <sup>***</sup>	0.148 <sup>***</sup>	0.195 <sup>***</sup>	0.063	-0.024	0.042	-0.134 <sup>***</sup>	0.067	-0.012	-0.045	0.150 <sup>***</sup>	-0.039	0.036	0.240 <sup>***</sup>
Sense of belonging (V20)	-0.009	0.081 <sup>*</sup>	-0.081 <sup>*</sup>	-0.017	0.003	0.055	0.081 <sup>*</sup>	0.114 <sup>**</sup>	-0.106 <sup>**</sup>	-0.028	0.025	0.045	0.101 <sup>**</sup>	0.013	-0.123 <sup>***</sup>
Positive quality of interactions (V21)	0.016	0.092 <sup>**</sup>	0.053	0.090 <sup>**</sup>	-0.006	0.027	0.082 <sup>*</sup>	0.131 <sup>***</sup>	-0.178 <sup>***</sup>	-0.003	0.096 <sup>**</sup>	-0.062	0.123 <sup>**</sup>	0.218 <sup>***</sup>	0.057
Negative quality of interactions (V22)	0.075 <sup>*</sup>	0.136 <sup>***</sup>	0.081 <sup>*</sup>	0.193 <sup>***</sup>	0.030	0.022	-0.025	-0.065	0.038	-0.055	0.019	0.034	0.017	0.080 <sup>*</sup>	0.175 <sup>***</sup>
Frequency of interactions (V23)	-0.083 <sup>*</sup>	-0.012	-0.035	0.004	-0.101 <sup>**</sup>	-0.117 <sup>**</sup>	0.016	0.003	-0.098 <sup>**</sup>	-0.036	0.235 <sup>***</sup>	-0.067	0.048	0.402 <sup>***</sup>	0.104 <sup>**</sup>
Same race interactions (V24)	0.033	0.095 <sup>*</sup>	0.068	0.053	0.131 <sup>***</sup>	0.243 <sup>***</sup>	0.046	0.192 <sup>***</sup>	-0.036	-0.094 <sup>**</sup>	0.041	0.027	-0.051	-0.041	-0.001
Participation in diversity co-curricular activities (V25)	0.201 <sup>***</sup>	0.350 <sup>***</sup>	0.145 <sup>***</sup>	0.236 <sup>***</sup>	0.111 <sup>***</sup>	0.106 <sup>**</sup>	0.143 <sup>***</sup>	-0.076 <sup>*</sup>	0.036	-0.008	-0.102 <sup>**</sup>	0.127 <sup>***</sup>	-0.016	0.103 <sup>**</sup>	0.114 <sup>**</sup>
Participation in cultural organizations (V26)	0.271 <sup>***</sup>	0.337 <sup>***</sup>	0.199 <sup>***</sup>	0.190 <sup>***</sup>	0.114 <sup>**</sup>	0.143 <sup>***</sup>	0.155 <sup>***</sup>	0.036	-0.019	0.014	-0.176 <sup>***</sup>	0.057	-0.078	-0.085 <sup>*</sup>	0.033
Lived on-campus (V27)	-0.034	-0.039	-0.047	0.001	0.020	-0.013	-0.004	0.279 <sup>***</sup>	-0.130 <sup>***</sup>	-0.010	0.068	-0.149 <sup>***</sup>	0.075	-0.042	-0.095 <sup>**</sup>
Courses with diversity readings and materials (V28)	0.079 <sup>**</sup>	0.115 <sup>***</sup>	0.017	0.162 <sup>***</sup>	-0.059 <sup>*</sup>	0.039 <sup>*</sup>	0.097	0.034	-0.071 <sup>*</sup>	-0.011	0.063 <sup>*</sup>	0.007	0.062 <sup>**</sup>	0.099 <sup>***</sup>	-0.003 <sup>**</sup>
Courses with intensive dialogue (V29)	0.069	0.098 <sup>**</sup>	0.099 <sup>**</sup>	0.135 <sup>***</sup>	0.020	0.044	0.069	0.042	-0.001	-0.044	0.077 <sup>*</sup>	0.029	-0.022	0.158 <sup>***</sup>	0.036
Courses with service-learning (V30)	0.068	0.091 <sup>*</sup>	0.022	0.007	-0.063	0.018	0.030	-0.011	0.009	-0.073 <sup>*</sup>	0.040	0.018	-0.055	0.117 <sup>**</sup>	0.036

**Table F.3 Correlations Matrix for Asian Pacific American Student Group (n=701) (cont.)**

	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
Predisposition to participate in diversity related experiences (V16)	1.000 <sup>***</sup>														
Moderate structural diversity (V17)	0.063	1.000 <sup>***</sup>													
Low structural diversity (V18)	0.118 <sup>***</sup>	-0.244 <sup>***</sup>	1.000 <sup>***</sup>												
Perception of negative climate for diversity (V19)	0.127 <sup>***</sup>	0.086 <sup>**</sup>	0.078 <sup>*</sup>	1.000 <sup>***</sup>											
Sense of belonging (V20)	0.066	0.005	-0.066	-0.183 <sup>***</sup>	1.000 <sup>***</sup>										
Positive quality of interactions (V21)	0.176 <sup>***</sup>	0.056	-0.095 <sup>**</sup>	0.009	0.190 <sup>**</sup>	1.000 <sup>***</sup>									
Negative quality of interactions (V22)	0.143 <sup>***</sup>	-0.002	0.131 <sup>***</sup>	0.349 <sup>***</sup>	-0.162 <sup>***</sup>	0.238 <sup>***</sup>	1.000 <sup>***</sup>								
Frequency of interactions (V23)	0.019	-0.009	-0.066	0.006	0.149 <sup>***</sup>	0.360 <sup>***</sup>	0.043	1.000 <sup>***</sup>							
Same race interactions (V24)	0.167 <sup>***</sup>	-0.021	-0.091 <sup>**</sup>	-0.040	0.175 <sup>***</sup>	0.141 <sup>***</sup>	-0.027	0.108 <sup>**</sup>	1.000 <sup>***</sup>						
Participation in diversity co-curricular activities (V25)	0.393 <sup>***</sup>	0.092 <sup>*</sup>	0.067	0.234 <sup>***</sup>	0.076	0.230 <sup>***</sup>	0.178 <sup>***</sup>	0.158 <sup>***</sup>	0.107 <sup>**</sup>	1.000 <sup>***</sup>					
Participation in cultural organizations (V26)	0.376 <sup>***</sup>	0.084 <sup>*</sup>	0.050	0.041	0.048	0.022	0.018	-0.071	0.177 <sup>***</sup>	0.318 <sup>***</sup>	1.000 <sup>***</sup>				
Lived on-campus (V27)	0.117 <sup>**</sup>	0.018	0.019	0.004	0.096 <sup>**</sup>	0.071	0.052	-0.017	0.150 <sup>***</sup>	-0.009	0.076 <sup>*</sup>	1.000 <sup>***</sup>			
Courses with diversity readings and materials (V28)	0.064 <sup>***</sup>	-0.027	0.022	0.013 <sup>***</sup>	0.069 <sup>**</sup>	0.168 <sup>***</sup>	0.040 <sup>**</sup>	0.222 <sup>***</sup>	0.063 <sup>*</sup>	0.138 <sup>***</sup>	-0.008	0.027	1.000 <sup>***</sup>		
Courses with intensive dialogue (V29)	0.101 <sup>**</sup>	-0.060	0.019	0.061	0.101 <sup>**</sup>	0.242 <sup>***</sup>	0.097 <sup>**</sup>	0.252 <sup>***</sup>	0.105 <sup>**</sup>	0.190 <sup>***</sup>	0.011	0.066	0.471 <sup>***</sup>	1.000 <sup>***</sup>	
Courses with service-learning (V30)	0.063	-0.079 <sup>*</sup>	0.028	0.093 <sup>**</sup>	0.087 <sup>**</sup>	0.096 <sup>**</sup>	0.039	0.112 <sup>**</sup>	0.016	0.218 <sup>***</sup>	0.014	-0.022	0.145 <sup>***</sup>	0.230 <sup>***</sup>	1.000 <sup>***</sup>

**Table F.4 Correlations Matrix for Latino Student Group (n=378)**

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
Sense of common fate--Time 1 (V1)	1.000 <sup>***</sup>														
Sense of common fate--Time 2 (V2)	0.496 <sup>***</sup>	1.000 <sup>***</sup>													
Race centrality--Time 1 (V3)	0.547 <sup>***</sup>	0.416 <sup>***</sup>	1.000 <sup>***</sup>												
Race centrality--Time 2 (V4)	0.478 <sup>***</sup>	0.501 <sup>***</sup>	0.492 <sup>***</sup>	1.000 <sup>***</sup>											
Shared racial/ethnic values--Time 1 (V5)	0.162 <sup>**</sup>	0.188 <sup>***</sup>	0.114 <sup>*</sup>	0.198 <sup>***</sup>	1.000 <sup>***</sup>										
Shared racial/ethnic values--Time 2 (V6)	0.130 <sup>*</sup>	0.214 <sup>**</sup>	0.046	0.179 <sup>**</sup>	0.535 <sup>***</sup>	1.000 <sup>***</sup>									
Female (V7)	0.032	0.102 <sup>*</sup>	0.048	0.103 <sup>*</sup>	0.077	0.123 <sup>*</sup>	1.000 <sup>***</sup>								
Converted SAT score (V8)	-0.116 <sup>*</sup>	-0.188 <sup>***</sup>	-0.041	-0.057	-0.227 <sup>***</sup>	-0.248 <sup>***</sup>	-0.184 <sup>***</sup>	1.000 <sup>***</sup>							
Mother's level of education--High School (V9)	0.075	0.046	0.035	0.097	0.062	0.012	0.027	-0.160 <sup>**</sup>	1.000 <sup>***</sup>						
Mother's level of education--College (V10)	0.056	0.022	0.005	0.000	0.150 <sup>*</sup>	0.070	0.097	-0.049	-0.333 <sup>***</sup>	1.000 <sup>***</sup>					
Generation status in the U.S. (V11)	-0.273 <sup>***</sup>	-0.248 <sup>***</sup>	-0.198 <sup>***</sup>	-0.197 <sup>***</sup>	0.050	0.053	0.064	0.026	-0.145 <sup>**</sup>	0.155 <sup>**</sup>	1.000 <sup>***</sup>				
Parental influence (V12)	0.044	0.131 <sup>**</sup>	-0.004	0.032	0.047	0.124 <sup>*</sup>	-0.039	-0.236 <sup>***</sup>	0.070	-0.005	0.025	1.000 <sup>***</sup>			
White pre-college environment (V13)	-0.146 <sup>**</sup>	-0.175 <sup>***</sup>	-0.066	-0.098	-0.147 <sup>***</sup>	-0.157 <sup>***</sup>	0.008	0.297 <sup>***</sup>	-0.234 <sup>***</sup>	-0.068	0.079	-0.081	1.000 <sup>***</sup>		
Pre-college frequency of interactions (V14)	0.036	0.105	-0.024	-0.051	-0.090	-0.035	0.016	0.010	-0.072	-0.015	-0.024	0.036	-0.121 <sup>**</sup>	1.000 <sup>***</sup>	
Pre-college experience of discrimination (V15)	0.164 <sup>**</sup>	0.150 <sup>**</sup>	0.184 <sup>***</sup>	0.156 <sup>**</sup>	0.064	0.004	0.105	-0.023	0.003	0.084	-0.031	0.033	0.005	0.147 <sup>**</sup>	1.000 <sup>***</sup>



**Table F.4 Correlations Matrix for Latino Student Group (n=378) (cont.)**

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
Predisposition to participate in diversity related experiences (V16)	0.471 <sup>***</sup>	0.392 <sup>***</sup>	0.329 <sup>***</sup>	0.330 <sup>***</sup>	0.107 <sup>*</sup>	0.134 <sup>**</sup>	0.104 <sup>*</sup>	-0.032	0.008	0.093	-0.246 <sup>***</sup>	0.040	-0.059	0.091	0.211 <sup>***</sup>
Moderate structural diversity (V17)	0.023	0.004	0.082	0.045	0.032	-0.010	-0.008	0.102 <sup>*</sup>	0.107 <sup>*</sup>	-0.019	0.060	-0.051	0.247 <sup>***</sup>	-0.033	-0.026
Low structural diversity (V18)	0.168 <sup>***</sup>	0.169 <sup>***</sup>	0.143 <sup>**</sup>	0.177 <sup>***</sup>	0.097 <sup>*</sup>	0.084	0.110 <sup>*</sup>	-0.188 <sup>***</sup>	-0.036	0.108 <sup>*</sup>	-0.215 <sup>***</sup>	-0.025	0.054	-0.087	0.177 <sup>***</sup>
Perception of negative climate for diversity (V19)	0.258 <sup>***</sup>	0.214 <sup>***</sup>	0.207 <sup>***</sup>	0.271 <sup>***</sup>	0.045	0.062	-0.007	0.029	0.015	0.015	-0.142 <sup>**</sup>	-0.082	-0.067	0.064	0.098 <sup>*</sup>
Sense of belonging (V20)	0.021	0.045	-0.033	0.005	0.026	0.039	0.012	0.047	0.001	0.020	-0.031	0.032	0.071	0.022	0.050
Positive quality of interactions (V21)	0.145 <sup>**</sup>	0.164 <sup>***</sup>	0.100 <sup>*</sup>	0.167 <sup>***</sup>	-0.017	0.027	0.112 <sup>*</sup>	0.133 <sup>**</sup>	-0.048	0.026	-0.079	0.018	0.125 <sup>*</sup>	0.216 <sup>***</sup>	0.074
Negative quality of interactions (V22)	0.191 <sup>***</sup>	0.261 <sup>***</sup>	0.159 <sup>***</sup>	0.262 <sup>***</sup>	0.052	-0.015	-0.002	-0.033	0.013	0.030	-0.093	0.054	0.052	0.015	0.106 <sup>*</sup>
Frequency of interactions (V23)	0.007	0.094	-0.010	-0.020	-0.086	-0.010	0.034	0.029	0.000	-0.024	-0.001	0.037	-0.014	0.382 <sup>***</sup>	0.093
Same race interactions (V24)	0.004	0.185 <sup>***</sup>	0.050	0.091	0.259 <sup>***</sup>	0.383 <sup>***</sup>	0.102 <sup>*</sup>	-0.334 <sup>***</sup>	0.057	0.028	0.113 <sup>*</sup>	0.073	-0.282 <sup>***</sup>	0.121 <sup>*</sup>	0.056
Participation in diversity co-curricular activities (V25)	0.230 <sup>***</sup>	0.364 <sup>***</sup>	0.168 <sup>***</sup>	0.213 <sup>***</sup>	0.100	0.134 <sup>**</sup>	0.053	-0.132 <sup>**</sup>	0.062	-0.001	-0.174 <sup>***</sup>	-0.020	-0.036	0.178 <sup>***</sup>	0.056
Participation in cultural organizations (V26)	0.241 <sup>***</sup>	0.244 <sup>***</sup>	0.183 <sup>***</sup>	0.293 <sup>***</sup>	0.102	0.125 <sup>**</sup>	0.047	-0.112 <sup>*</sup>	0.111 <sup>*</sup>	0.029	-0.200 <sup>***</sup>	0.072	-0.183 <sup>***</sup>	-0.001	0.142 <sup>**</sup>
Lived on-campus (V27)	0.020	0.020	0.053	-0.021	-0.195 <sup>***</sup>	-0.215 <sup>***</sup>	-0.055	0.238 <sup>***</sup>	-0.036	-0.033	-0.194 <sup>***</sup>	-0.138 <sup>***</sup>	0.121 <sup>*</sup>	-0.095	-0.026
Courses with diversity readings and materials (V28)	0.149 <sup>***</sup>	0.138 <sup>***</sup>	0.078 <sup>**</sup>	0.113 <sup>**</sup>	0.159 <sup>***</sup>	0.143 <sup>***</sup>	0.020	-0.038	-0.026	-0.040	0.052	0.084	-0.003	0.008	0.029 <sup>*</sup>
Courses with intensive dialogue (V29)	0.074	0.055	0.069	-0.011	0.017	0.058	0.025	0.062	-0.014	0.060	0.019	0.065	-0.012	0.190 <sup>***</sup>	0.115 <sup>*</sup>
Courses with service-learning (V30)	0.019	0.065	-0.010	0.122 <sup>*</sup>	-0.002	0.033	0.061	0.061	0.022	-0.023	0.021	0.075	0.101 <sup>*</sup>	0.055	-0.039

**Table F.4 Correlations Matrix for Latino Student Group (n=378) (cont.)**

	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
Predisposition to participate in diversity related experiences (V16)	1.000 <sup>***</sup>														
Moderate structural diversity (V17)	-0.041	1.000 <sup>***</sup>													
Low structural diversity (V18)	0.297 <sup>***</sup>	-0.198 <sup>***</sup>	1.000 <sup>***</sup>												
Perception of negative climate for diversity (V19)	0.284 <sup>***</sup>	0.117 <sup>**</sup>	0.185 <sup>***</sup>	1.000 <sup>***</sup>											
Sense of belonging (V20)	0.133 <sup>*</sup>	0.013	0.009	-0.159 <sup>**</sup>	1.000 <sup>***</sup>										
Positive quality of interactions (V21)	0.335 <sup>***</sup>	-0.034	0.126 <sup>**</sup>	0.253 <sup>***</sup>	0.218 <sup>***</sup>	1.000 <sup>***</sup>									
Negative quality of interactions (V22)	0.269 <sup>***</sup>	0.017	0.185 <sup>***</sup>	0.446 <sup>***</sup>	-0.124 <sup>**</sup>	0.344 <sup>***</sup>	1.000 <sup>***</sup>								
Frequency of interactions (V23)	0.100 <sup>°</sup>	-0.009	0.042	0.031	0.165 <sup>***</sup>	0.292 <sup>***</sup>	0.036	1.000 <sup>***</sup>							
Same race interactions (V24)	0.080	-0.151 <sup>**</sup>	0.081	0.004	0.092	0.099 <sup>°</sup>	0.013	0.287 <sup>***</sup>	1.000 <sup>***</sup>						
Participation in diversity co-curricular activities (V25)	0.397 <sup>***</sup>	0.095	0.247 <sup>***</sup>	0.339 <sup>***</sup>	0.158 <sup>**</sup>	0.360 <sup>***</sup>	0.313 <sup>***</sup>	0.196 <sup>***</sup>	0.241 <sup>**</sup>	1.000 <sup>***</sup>					
Participation in cultural organizations (V26)	0.421 <sup>***</sup>	-0.023	0.344 <sup>***</sup>	0.147 <sup>**</sup>	0.079	0.094 <sup>*</sup>	0.154 <sup>**</sup>	0.016	0.202 <sup>***</sup>	0.344 <sup>***</sup>	1.000 <sup>***</sup>				
Lived on-campus (V27)	0.216 <sup>***</sup>	0.016	0.237 <sup>***</sup>	0.156 <sup>***</sup>	0.160 <sup>**</sup>	0.165 <sup>**</sup>	0.107 <sup>*</sup>	0.112 <sup>*</sup>	-0.173 <sup>***</sup>	0.184 <sup>***</sup>	0.129 <sup>**</sup>	1.000 <sup>***</sup>			
Courses with diversity readings and materials (V28)	0.119 <sup>***</sup>	-0.020	0.098 <sup>**</sup>	0.056 <sup>***</sup>	0.185 <sup>***</sup>	0.136 <sup>***</sup>	0.008	0.072 <sup>***</sup>	0.112	0.124 <sup>***</sup>	0.072 <sup>**</sup>	0.050	1.000 <sup>***</sup>		
Courses with intensive dialogue (V29)	0.169 <sup>***</sup>	-0.037	0.113 <sup>*</sup>	0.045	0.148 <sup>***</sup>	0.244 <sup>***</sup>	0.031	0.198 <sup>***</sup>	0.076	0.144 <sup>**</sup>	0.002	0.049	0.388 <sup>***</sup>	1.000 <sup>***</sup>	
Courses with service-learning (V30)	0.125 <sup>**</sup>	0.033	0.097	0.064	0.029	0.228 <sup>***</sup>	0.156 <sup>**</sup>	0.156 <sup>**</sup>	-0.037	0.196 <sup>***</sup>	0.027	0.111 <sup>*</sup>	0.215 <sup>***</sup>	0.251 <sup>***</sup>	1.000 <sup>***</sup>

**Table F.5 Correlations Matrix for African American Student Group (n=223)**

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
Sense of common fate--Time 1 (V1)	1.000 <sup>***</sup>														
Sense of common fate--Time 2 (V2)	0.299 <sup>***</sup>	1.000 <sup>***</sup>													
Race centrality--Time 1 (V3)	0.319 <sup>***</sup>	0.138	1.000 <sup>***</sup>												
Race centrality--Time 2 (V4)	0.204 <sup>**</sup>	0.432 <sup>***</sup>	0.287 <sup>***</sup>	1.000 <sup>***</sup>											
Shared racial/ethnic values--Time 1 (V5)	0.171 <sup>*</sup>	0.131	0.202 <sup>**</sup>	0.230 <sup>***</sup>	1.000 <sup>***</sup>										
Shared racial/ethnic values--Time 2 (V6)	0.067	0.221 <sup>**</sup>	0.015	0.211 <sup>***</sup>	0.557 <sup>***</sup>	1.000 <sup>***</sup>									
Female (V7)	0.056	0.105	0.094	0.231 <sup>***</sup>	0.212 <sup>***</sup>	0.167 <sup>**</sup>	1.000 <sup>***</sup>								
Converted SAT score (V8)	-0.085	-0.082	0.059	-0.039	0.169 <sup>**</sup>	0.042	0.068	1.000 <sup>***</sup>							
Mother's level of education--High School (V9)	0.112	0.016	0.028	0.040	-0.009	0.097	0.061	-0.123	1.000 <sup>***</sup>						
Mother's level of education--College (V10)	-0.014	0.010	-0.042	0.016	0.032	0.062	-0.103	-0.120	-0.166 <sup>**</sup>	1.000 <sup>***</sup>					
Generation status in the U.S. (V11)	-0.047	0.005	-0.031	0.119	0.198	0.181	0.165 <sup>***</sup>	0.083	-0.056	0.128	1.000 <sup>***</sup>				
Parental influence (V12)	0.244 <sup>***</sup>	0.038	0.079	-0.045	-0.015	0.033	-0.003	-0.161 <sup>*</sup>	-0.079	-0.022	-0.265 <sup>***</sup>	1.000			
White pre-college environment (V13)	-0.108	-0.189	-0.005 <sup>***</sup>	-0.166 <sup>***</sup>	-0.179 <sup>***</sup>	-0.075 <sup>**</sup>	0.053	0.213 <sup>***</sup>	-0.039	-0.088	0.108	0.018	1.000		
Pre-college frequency of interactions (V14)	0.047	-0.092	0.165 <sup>**</sup>	0.012	0.096	0.030	-0.143 <sup>*</sup>	0.082	0.015	-0.047	0.103	-0.042	0.147	1.000	
Pre-college experience of discrimination (V15)	0.118	0.023	0.179 <sup>**</sup>	-0.002	0.118	0.138 <sup>*</sup>	0.159 <sup>*</sup>	0.144 <sup>*</sup>	-0.076	0.004	0.115	0.020	0.102	0.076	1.000

**Table F.5 Correlations Matrix for African American Student Group (n=223) (cont.)**

	VI	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
Predisposition to participate in diversity related experiences (V16)	0.329 <sup>***</sup>	0.256 <sup>***</sup>	0.243 <sup>***</sup>	0.187 <sup>***</sup>	0.219 <sup>***</sup>	0.153 <sup>**</sup>	0.112	0.015	0.127	-0.119	-0.049	0.103 <sup>*</sup>	0.010	0.068	0.104
Moderate structural diversity (V17)	-0.117	0.037	0.039	0.068	0.186 <sup>**</sup>	0.100	0.008	0.079	-0.015	0.001	0.274 <sup>***</sup>	-0.133 <sup>*</sup>	0.037	-0.051	0.191 <sup>***</sup>
Low structural diversity (V18)	0.091	0.108	0.048	0.187 <sup>**</sup>	0.070	0.071	-0.037	-0.237 <sup>***</sup>	0.163 <sup>**</sup>	-0.018	0.005	0.100	-0.035	-0.033	-0.141 <sup>*</sup>
Perception of negative climate for diversity (V19)	0.165 <sup>**</sup>	0.291 <sup>***</sup>	0.143 <sup>*</sup>	0.231 <sup>***</sup>	0.119	0.118	0.073	0.016	0.105	-0.072	0.101	-0.138 <sup>*</sup>	-0.017	0.042	0.234 <sup>***</sup>
Sense of belonging (V20)	-0.064	0.100	-0.065	-0.078	-0.066	0.080	0.045	0.219 <sup>***</sup>	-0.003	0.023	0.038	0.066	0.133 <sup>*</sup>	-0.116	-0.063
Positive quality of interactions (V21)	0.023	0.044	-0.044	0.006	0.029	0.007	0.061	0.108	-0.155 <sup>***</sup>	-0.101	0.110	0.048	0.186 <sup>*</sup>	0.104	-0.100
Negative quality of interactions (V22)	0.137 <sup>*</sup>	0.208 <sup>**</sup>	0.072	0.210 <sup>***</sup>	0.082	0.130	0.007	0.011	0.071	-0.052	0.011	-0.016	-0.055	0.046	0.111
Frequency of interactions (V23)	-0.017	-0.020	-0.081	-0.094	0.009	0.062	0.012	0.094	-0.091	0.052	-0.017	0.047	0.050	0.186 <sup>***</sup>	0.029
Same race interactions (V24)	0.010	0.228	0.018	0.186 <sup>**</sup>	0.315 <sup>***</sup>	0.454 <sup>***</sup>	0.191 <sup>**</sup>	0.020	0.076	0.015	0.211 <sup>***</sup>	0.036	-0.134 <sup>*</sup>	-0.102	0.080
Participation in diversity co-curricular activities (V25)	0.169 <sup>**</sup>	0.369 <sup>***</sup>	0.072	0.226 <sup>***</sup>	0.110 <sup>***</sup>	0.191 <sup>***</sup>	0.081	-0.138 <sup>*</sup>	0.076	-0.132 <sup>*</sup>	0.017	0.119	-0.190 <sup>***</sup>	-0.055	0.025
Participation in cultural organizations (V26)	0.128	0.190 <sup>**</sup>	0.058	0.068	-0.110	-0.076	-0.029	-0.107	-0.001	-0.152 <sup>*</sup>	-0.148 <sup>*</sup>	0.066	-0.065	0.069	-0.041
Lived on-campus (V27)	-0.097	0.139 <sup>**</sup>	0.000	0.068	0.154	0.121	0.113	0.142 <sup>*</sup>	0.033	-0.149 <sup>*</sup>	0.133 <sup>*</sup>	-0.134 <sup>*</sup>	-0.011	-0.016	-0.008
Courses with diversity readings and materials (V28)	-0.036	0.103 <sup>***</sup>	0.038	0.130	0.176	0.219 <sup>***</sup>	0.262 <sup>**</sup>	0.167 <sup>***</sup>	-0.064	0.052	0.244 <sup>***</sup>	0.020	0.151	0.112	0.142
Courses with intensive dialogue (V29)	0.072	0.186 <sup>*</sup>	0.085	0.148 <sup>*</sup>	0.170 <sup>***</sup>	0.307 <sup>***</sup>	0.170 <sup>**</sup>	0.107	0.053	-0.073	0.259 <sup>***</sup>	0.009	-0.062	-0.030	0.105
Courses with service-learning (V30)	0.022	0.115 <sup>*</sup>	0.111	0.076	0.154	0.212 <sup>***</sup>	0.138 <sup>*</sup>	0.050	0.040	-0.126	0.071	0.111	-0.039	0.105	0.049

**Table F.5 Correlations Matrix for African American Student Group (n=223) (cont.)**

	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
Predisposition to participate in diversity related experiences (V16)	1.000														
Moderate structural diversity (V17)	-0.165 <sup>***</sup>	1.000 <sup>***</sup>													
Low structural diversity (V18)	0.110 <sup>*</sup>	-0.312 <sup>***</sup>	1.000 <sup>***</sup>												
Perception of negative climate for diversity (V19)	0.230 <sup>***</sup>	0.258 <sup>***</sup>	0.062	1.000 <sup>***</sup>											
Sense of belonging (V20)	-0.031	-0.054	-0.045	-0.045	1.000 <sup>***</sup>										
Positive quality of interactions (V21)	0.144 <sup>*</sup>	-0.118	-0.002	-0.035	0.190 <sup>**</sup>	1.000 <sup>***</sup>									
Negative quality of interactions (V22)	0.183 <sup>***</sup>	0.129 <sup>*</sup>	0.055	0.503 <sup>***</sup>	-0.148 <sup>*</sup>	0.208 <sup>**</sup>	1.000 <sup>***</sup>								
Frequency of interactions (V23)	0.002	-0.036	0.012	-0.026	0.254 <sup>***</sup>	0.363 <sup>***</sup>	0.075	1.000 <sup>***</sup>							
Same race interactions (V24)	0.152 <sup>**</sup>	0.114	0.217 <sup>***</sup>	0.246 <sup>***</sup>	0.092	0.070	0.158 <sup>*</sup>	0.139	1.000 <sup>***</sup>						
Participation in diversity co-curricular activities (V25)	0.336 <sup>***</sup>	0.089	0.062	0.261 <sup>***</sup>	-0.012	0.151 <sup>*</sup>	0.242 <sup>***</sup>	0.044 <sup>*</sup>	0.255 <sup>***</sup>	1.000 <sup>***</sup>					
Participation in cultural organizations (V26)	0.294 <sup>***</sup>	-0.098	0.169 <sup>**</sup>	0.152 <sup>**</sup>	-0.035	0.029	0.157 <sup>*</sup>	0.037	0.135 <sup>*</sup>	0.359 <sup>***</sup>	1.000 <sup>***</sup>				
Lived on-campus (V27)	0.015	0.147 <sup>*</sup>	0.010	0.194 <sup>**</sup>	0.176 <sup>**</sup>	-0.025	0.068	0.040	0.231 <sup>**</sup>	0.144 <sup>*</sup>	0.082	1.000 <sup>***</sup>			
Courses with diversity readings and materials (V28)	0.059 <sup>***</sup>	-0.019	0.026	0.029 <sup>***</sup>	0.172 <sup>***</sup>	0.065 <sup>*</sup>	-0.005 <sup>**</sup>	0.127 <sup>**</sup>	0.267 <sup>***</sup>	-0.037 <sup>*</sup>	0.021	0.269 <sup>***</sup>	1.000 <sup>***</sup>		
Courses with intensive dialogue (V29)	0.070	0.181 <sup>**</sup>	-0.102	0.236 <sup>***</sup>	0.176 <sup>**</sup>	0.097	0.076	0.107	0.392 <sup>***</sup>	0.179 <sup>**</sup>	-0.057	0.208 <sup>**</sup>	0.328 <sup>***</sup>	1.000 <sup>***</sup>	
Courses with service-learning (V30)	0.162 <sup>**</sup>	-0.105	-0.004	0.091	0.142	0.074	0.089	0.057	0.225 <sup>***</sup>	0.300 <sup>***</sup>	0.018	0.041	0.262 <sup>***</sup>	0.197 <sup>**</sup>	1.000 <sup>***</sup>

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