Assessing the Value of Climate Assessments:
Progress and Future Directions

Sylvia Hurtado
University of California

Kimberly A. Griffin
Pennsylvania State University

Lucy Arellano
University of California

Marcela Cuellar
University of California

The authors synthesize existing climate research and climate instruments, as well as introduce several frameworks to help educators understand how institutions and researchers have assessed diversity in the college environment. Over 90 instruments were reviewed and examined for their attention to multiple dimensions of the campus climate, diversity initiatives, and outcomes measures that capture students' values, skills, and knowledge for participation in a diverse society. Frameworks presented include a broad definition of the campus climate, a typology of campus initiatives based on an inventory of campus practice, and a typology of representative outcomes that capture cognitive, socio-cognitive, values/attitudes, and preparation for a multicultural society. Campuses that strive to become functional multicultural learning environments can now rely on a body of empirical information to guide practice and critical self-assessment to deepen their commitment to diversity. The authors recommend that campuses integrate their assessment of the climate with the evaluation of student outcomes and campus practice.

Keywords: campus climate, assessment, frameworks

Examining the climate for diversity is an important part of campus-based assessment activity, especially as postsecondary institutions enter an era of "evidence-based" practice and aim to identify areas for improvement to achieve educational goals for an increasingly diverse student body. Early efforts to assess climate arose out of a need to attend to a myriad of campus diversity issues, most significant of which were recurring racial incidents that sparked media attention. Over time, campuses began climate assessments as a proactive initia-tive rather than a reactive attempt to deal with significant issues affecting women, racial/ethnic minorities, disabled students, and LGBT students (Michigan Student Study, 2008). As a result of both institutionally based and multi-campus surveys on a national level, a body of research emerged that began to link the campus climate with key educational outcomes.

The purpose of this paper is to synthesize existing climate research and introduce several frameworks that help us better understand how institutions and scholars have begun to think about the climate and its assessment. We begin with a review of research that served to document climate as more than a part of the perception of marginalized individuals, but rather a multidimensional environmental factor with real effects on educational outcomes. That is, the campus climate is part of an intricate web of relations, socially constructed by individuals in an environment. Campus climate research has been synthesized by multiple authors (e.g., Harper & Hurtado, 2007; Hurtado, Carter, & Kardia, 1998; Hurtado, Milem, Clayton-

Sylvia Hurtado, Department of Education, University of California, Los Angeles; Kimberly A. Griffin, Department of Education Policy Studies, The Pennsylvania University; Lucy Arellano, Department of Education, University of California, Los Angeles; Marcela Cuellar, Department of Education, University of California, Los Angeles.

Correspondence concerning this article should be addressed to Sylvia Hurtado, Department of Education, UCLA Graduate School of Education and Information Studies, Higher Education Research Institute, Box 951521, 3005C Moore Hall, Los Angeles, CA 90095-1521. E-mail: shurtado@gseis.ucla.edu

Pederson, & Allen, 1999; Milem, Chang, & Antonio, 2005), and although we communicate similar themes in this review, we focus on the implications of this research for assessment. In the process, we not only identified results from published articles; we also gathered and evaluated over 90 survey instruments that have been administered on campuses or appear in the literature dating back to 1985. Among these, we reviewed student surveys, including 18 multicampus and 29 single-institution surveys administered to each institution's respective general student body. Thirteen were institutional-specific and administered to specific target groups (e.g., Latino, African American, LGBT students). An additional nine surveys were classroom-based assessments, with limited administration to specific courses or fields of study. We also reviewed five instruments that were focused on assessing multicultural competencies. To the best of our knowledge, the majority of the institutionally devised and classroom-based surveys were administered only once on a campus. We also reviewed nine faculty surveys, half of which were instruments used on multiple campuses. Finally, seven staff surveys were also analyzed.

The incorporation of diversity-related questions in these surveys varies widely, depending on whether issues of diversity are the main focus or considered one of many areas to assess. We identified key concepts addressed in these instruments, including: the conceptualization of the climate; how diversity practices were captured; and whether there is a focus on educational outcomes related to diversity. In doing so, we employ a broad conceptualization of climate research and its implications for practice. This approach was chosen based on the recent push for outcomes assessment, which neglects to identify aspects of the educational environment that may account for varied educational outcomes that have much to do with diversity issues and the reinforcement of inequity in academia. Our review of the instruments used to produce a large body of research reveals that climate assessments will be of limited use if they are not tied to practice (interventions) or educational outcomes. We conclude by identifying gaps and important areas for the advancement of climate assessment that have direct implications for the practice of educating citizens prepared to engage a pluralistic society.

Broadening Conceptions of the Campus Climate

First, it is important to acknowledge that although researchers have studied aspects of the climate for various groups (e.g., race/ethnicity, gender, sexual orientation, and disability), much of the research in higher education has been conducted on the racial climate. It is beyond the scope of this paper to address climate research specific to all underserved groups, but it is an issue we will return to at the end of this article, especially considering similar issues are relevant in understanding the experiences of different social identity groups (Hurtado, Carter, & Kardia, 1998). We focus here on advances in research on the campus racial climate, yet will also occasionally reference studies and survey instruments that incorporate the wide variety of social identity groups on a diverse campus.

To offer a working definition, the campus racial climate is a part of the institutional context that includes community members' attitudes, perceptions, behaviors, and expectations around issues of race, ethnicity, and diversity (Hurtado et al., 1999). A framework for understanding the campus racial climate describes it as a multidimensional construct, subject to and shaped by the policies, practices, and behaviors of those within and external to colleges and universities (Hurtado, Milem, Clayton-Pedersen, & Allen, 1998, 1999). This brings attention to the potential of external forces in the larger society to impact institutions, and individuals within them, especially when it comes to the climate. Specifically, government policy and sociohistorical context are acknowledged as two external forces influencing the institutional context for diversity. However, attention both here and in the research is focused on the four climate-related factors internal to and within the control of individual colleges and universities. As is illustrated in Figure 1, these include: compositional or structural diversity, the psychological dimension of the climate, the behavioral dimension of the climate, and an institution's history and legacy of inclusion or exclusion (Hurtado et al., 1998, 1999).

This original framework was derived from existing qualitative and quantitative research on a variety of racial/ethnic groups. More recently, a modification of the framework was introduced that acknowledges the influence of specific institutional structures including curriculum, pol-
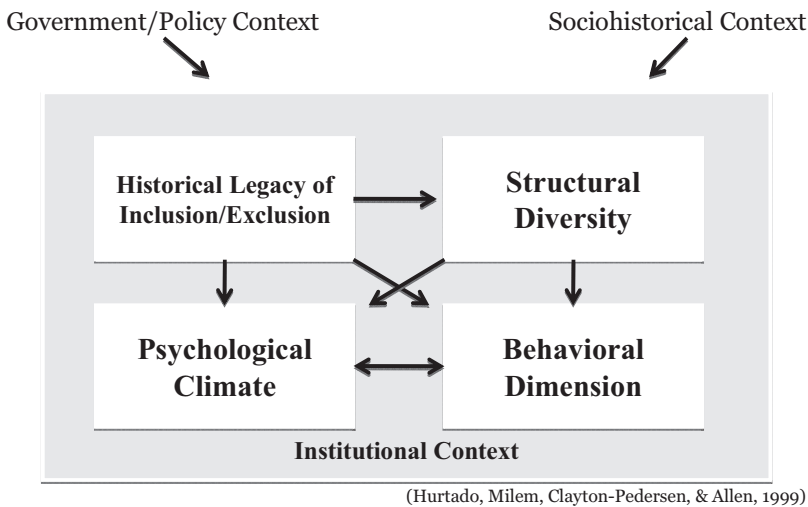
Government/Policy Context   Sociohistorical Context

(Hurtado, Milem, Clayton-Pedersen, & Allen, 1999)

Figure 1.   Elements influencing the climate for racial/ethnic diversity.

icies, and resources (Milem, Chang, & Antonio, 2005); however, with the exception of research focused on the influence of a diverse curriculum, there is very little scholarship to establish an empirical link between structural support at the institutional level and campus racial climate. The value placed on actual campus practice is not lost in the original model used in this review, however. We currently include it under the behavioral dimension, as campuses become more strategic in creating less hostile conditions for historically underrepresented groups and educating the campus about diversity.

Questions assessing various aspects of campus racial climate were included in many of the surveys reviewed for this study; only nine surveys did not include climate related questions. In other words, although the extent and depth of the assessments varied greatly, over 90% of the surveys aimed to include some measures evaluating the campus racial climate. Although it is rare that all dimensions are assessed, some campuses have attempted a comprehensive, multidimensional approach to examine existing structures and norms (Hurtado, Maestas, Hill, Inkelas, Wathington, & Waterson, 1998) or to measure the impact of changing policies (Michigan Student Study, 2008). The influence of an institution's legacy of inclusion or exclusion, for example, is largely unaddressed in campus racial climate survey research because it involves more in-depth study of norms that may

be embedded in campus culture, traditions, policies, and historical mission. The closest we have come to assessing this dimension within national surveys are in measures that include student and faculty ratings of diversity-related institutional priorities (e.g., priorities to recruit more students or faculty of color), administered by the Higher Education Research Institute (HERI) as part of the Faculty Survey and the Cooperative Institutional Research Program (CIRP). In another survey of Chief Academic Officers, researchers attempted to assess how diversity was integrated into the mission and embedded in the rewards system of an institution (Hurtado, 2003). Others have summarized aspects of this legacy of inclusion or exclusion in qualitative studies of the climate (Harper & Hurtado, 2007; Hurtado, Maestas, et al., 1998).

This review addresses research on the structural, psychological, and behavioral dimensions of campus racial climate, dimensions most often assessed using quantitative methods. These dimensions are often captured on survey instruments through questions that reveal how campus constituents perceive and experience various aspects of climate, as well as subsequent influence on outcomes.

Structural Diversity

Frequently described as the first step that must be taken in developing an environment

that fosters a positive climate and intergroup relations, structural diversity refers to the physical presence of previously underrepresented groups at a particular institution (Hurtado et al., 1999). This dimension is often considered when institutional leaders initiate diversity-related programs and policies on their campuses and involves efforts to increase the diversity of students, staff, and faculty. Structural diversity is an important component of the campus racial climate framework, and scholars have found it is related to minority students' perceptions of tension on campus and experiences with racism, as well as their academic adjustment to college (Hurtado, 1994; Hurtado, Carter, & Spuler, 1996).

Despite its importance, multiple scholars have noted and revealed that the singular act of increasing the number of people of color on a campus will not create a more positive racial climate (Cabrera, Nora, Terenzini, Pascarella, & Hagerdorn, 1999; Chang, 2002b; Hurtado, 1992; Hurtado et al., 1999; Milem, Chang, & Antonio, 2005). Structural diversity is perceived as a catalyst for promoting a more hospitable campus racial climate; it is a necessary, but not sufficient, factor in creating a more comfortable and less hostile environment for all (Gurin, Dey, Hurtado & Gurin, 2002; Hurtado et al., 1999). For example, several researchers found that the number of students of color on a campus is linked with students' interactions across race (Chang, 1999; Chang, Astin, & Kim, 2004; Chang, Denson, Sáenz, & Misa, 2006; Pike & Kuh, 2006), and this is particularly true for White students (Chang et al., 2004; Sáenz, Ngai, & Hurtado, 2007). Thus, the influence of structural diversity can be understood as directly enhancing the opportunity for intergroup contact, which in turn affects educational outcomes over time (Chang, 1999; Chang et al., 2004; Gurin et al., 2002; Engberg, 2004; Jayakumar, 2007; Pike & Kuh, 2006). In other words, the presence of diverse peers works indirectly through students' experiences and interactions with people of different racial and ethnic backgrounds to affect a host of educational outcomes identified later in this review.

Because structural diversity must be present for changes in perceptions and behaviors to occur, one way to understand the campus climate is to assess structural diversity throughout the institution. Many institutional reports have focused on the representation of women and minorities on campus. For the longest time, this was the primary way that campuses kept benchmarks on progress toward diversity goals. However, the changing composition of college students in terms of race, ethnicity, and gender has allowed some campuses to claim progress when, in fact, little has been done to transform the culture and climate of the institution. Moreover, the tallies of diverse individuals on a campus alone have not served as a strong enough motivating force to change practices, such as better incorporation of diversity in the curriculum or facilitating opportunities for intergroup dialogue and interaction.

One promising development is the use of equity indicators to examine aspects of a campus's structural diversity, such as the "equity scorecard" (Bensimon, 2004), which encourages campuses to review disaggregated data by race and gender. Campuses can begin to examine how equity is addressed in several areas, including: (1) *access* to an institution's programs and resources; (2) *retention* rates by academic program, completion of basic skill courses, and degree attainments; (3) *institutional receptivity* in the form of representation at all levels of the campus; and (4) *excellence* in terms of the racial/ethnic representation of students in courses or majors that lead to advanced study, high levels of student achievement, and expanding the pool of students eligible for graduate study. Although this is not typically viewed as climate research, the continued neglect of equity for women and minorities in various fields and in access to institutional resources stands as a significant barrier to their progress. Further, the underrepresentation of groups or "solo status" in any area reinforces stereotypes and determines others' expectations of their success (Thompson & Sekaquaptewa, 2002).

We encourage campuses to continue to assess structural diversity using actual numbers to determine equity (e.g., salary equity studies) as well as representation of various groups (e.g., the equity score card) because it frames other dimensions of the overall climate. The sheer exercise of examining disaggregated data and reflecting on implications for improving practice has brought about greater awareness of the key equity dilemmas campuses must confront (Bensimon, 2004). We must acknowledge that increases in the

numbers of previously underrepresented groups may not always significantly change perceptions, behaviors, or outcomes within the campus community. In response, diverse campuses have had to delve further into equity issues using institutional data, as well as focus on the psychological climate and intergroup relations aspects of their environments.

In addition to numerical assessments of structural diversity and equity, we also saw evidence of campus attempts to assess perceptions of priorities to recruit more women and minorities in our review of diversity assessments (e.g., HERI Faculty Survey). Because perceptions differ substantially by race, ethnicity and gender groups, these types of survey measures—focused on structural diversity—begin to tap into the psychological dimension of support and awareness prevalent on a campus. These perceptions can be compared with actual structural changes campus-wide or in schools/colleges and departmental units. Therefore, they provide important insight into how diverse a campus *feels* and the emphasis placed on its importance, as compared to how structurally diverse a campus is according to the numbers.

The Psychological Dimension of the Climate

In addition to attending to structural diversity, institutions must monitor and aim to improve the psychological climate on campus. This dimension of the framework is meant to capture the extent to which individuals perceive racial conflict and discrimination on campus (Hurtado, 1992), feel somehow singled-out because of their background (Nora & Cabrera, 1996), or perceive institutional support/commitment related to diversity (Hurtado et al., 1999). The body of research on intergroup anxiety can also be classified as addressing aspects of the psychological climate (Stephan & Stephan, 1989, 1996).

The majority of articles on campus racial climate focus on the psychological dimension, assessing students' (and to a limited extent professors') encounters with and perceptions of discrimination on campus. In many studies, overall measures of the campus racial climate are described in ways that suggest it is nearly synonymous with the psychological climate. However, Hurtado (1994) highlighted the psychological dimension as a specific aspect of the climate, distinct from overall assessments, in her study of talented Latino students. In this study, perceiving a hostile campus climate was not necessarily equivalent to measures of behaviors that reflect actual experiences of discrimination. Although often related, experiencing racism and perceiving hostility or tension on campus were, in fact, found to be separate constructs to be assessed. Further, recent research shows perceptions of a hostile climate can be somewhat influenced by the quality of cross-racial interactions, but that perceptions of a hostile climate are more likely a function of intergroup anxiety and predisposition to become engaged in diversity while in college (Locks, Hurtado, Bowman, & Oseguera, 2008). That is, individual students can report having frequent personal and positive cross-racial interactions and still perceive a hostile climate. Moreover, White students who expect to be engaged in diversity activities upon college entry also tended to perceive a more hostile racial climate during college, perhaps because the environment did not meet their expectations.

Overall, two sets of findings emerge from work exploring the psychological climate and its influence. First, scholars have determined individuals experience campuses very differently. They report varying experiences with discrimination and perceptions of its prevalence on a given campus depending on their positionality, or their representation and power on campus (Harper & Hurtado, 2007; Hurtado, 1992; Hurtado et al., 1999). Most often, it has been found that students from different racial and ethnic backgrounds experience their environments in distinct ways. Students of color have more observed and direct encounters with racism than their White peers, and therefore, perceive their campuses as more hostile and discriminatory (Ancis, Sedlacek, & Mohr, 2000; Cabrera & Nora, 1994; D'Augelli & Hershberger, 1993; Eimers & Pike, 1997; Pewewardy & Frey, 2002; Rankin & Reason, 2005; Suarez-Balcazar, Orellana-Damacela, Portillo, Rowan, & Andrews-Guillen, 2003; Whitmire, 2004). For example, although over 85% of White students in Pewewardy and Frey's (2002) campus racial climate study reported never being treated badly on campus because of their ethnicity, only 57% of students of color made the same assertion. In their 10 campus study,

Rankin and Reason (2005) also found that students of color reported experiencing more harassment than White students.

Several studies indicate Black students are especially likely to experience the psychological climate at their campus as hostile. In comparing students from various racial and ethnic backgrounds, Suarez-Balcazar et al. (2003) and Ancis et al. (2000) found Black students perceived more racial conflict and discrimination, as well as more often reported experiences with differential treatment than White, Latino, and Asian students. Further, when asked how often Black students encounter racism, White students participating in D'Augelli and Hershberger's (1993) study thought Black students were less likely to experience discrimination than the Black students themselves actually reported.

These findings highlight the fact that the underrepresentation of students of color in climate assessments will result in very different findings for a campus. It will be evident not only in an underreporting of the differences in perceptions, but also actual experiences and behaviors in an academic environment. The more marginalized students feel, the less likely they are to respond to assessments. It is also important to note that the percentage of students who actually report instances of discrimination to a college official may be extremely low, but many more underrepresented students (and faculty) will indicate their perceptions of more subtle forms of hostility (Hurtado et al., 1998). For this reason, specific climate assessments have often focused on soliciting the perceptions, views, and experiences of target groups (e.g., National Study of Black College Students, 1985; University of Massachusetts, Amherst-ALANA Project Pulse Student Survey, 1997).

The second overall finding in psychological climate research is that perceptions of a hostile climate can negatively influence student outcomes, particularly for students of color (Cabrera et al., 1999; Cress & Ikeda, 2003; Cureton, 2003; Eimers & Pike, 1997; Hurtado & Carter, 1997; Hurtado, Carter, & Spuler, 1996; Lopez, 2005; Nora & Cabrera, 1996; Perrucci & Hu, 1995; Smedley, Myers, & Harrell, 1993). This was demonstrated across multiple studies by Hurtado and her colleagues (i.e., Hurtado, Carter, & Spuler, 1996; Hurtado & Ponjuan, 2005), showing Latino students who perceive a hostile climate have a lower sense of

belonging than those Latinos who feel they are at more hospitable institutions. In fact, subtle perceptions of a hostile climate had more of an impact on all areas of adjustment to college (social, academic, personal-emotional, and attachment to the institution) than actual behaviors (detailed in the next section). Minority status stresses, including discrimination and doubts about one's academic abilities, have also been shown to add to students' psychological distress and achievement (Smedley, Myers, & Harrell, 1993). Cress and Ikeda (2003) found a connection between perceptions of a hostile and discriminatory climate and students' reports of depression after 4 years of college.

Research has also revealed that students from all racial and ethnic backgrounds are negatively influenced by hostile climates, although sometimes affected differently. This was especially evident in the work of Eimers and Pike (1997). Their analyses reveal that perceived discrimination has the potential to affect all students, with those who see their campus as more discriminatory reporting lower levels of academic integration. Nora and Cabrera (1996) as well as Cabrera and colleagues (1999) found experiences in a hostile psychological climate had significant effects on the social integration and institutional commitment of students from all backgrounds, but specifically negatively influencing the social experiences and academic development of Black students and the goal commitments of White students. Additionally, recent work confirms that all students on a diverse campus (White and students of color) who perceive a hostile climate are likely to feel a lower sense of belonging to the campus community (Locks et al., 2008). It also lowers a sense of academic success in the first year, particularly for underrepresented students in the sciences (Hurtado, Han, Sáenz, Espinosa, Cabrera, & Cerna, 2007).

The Behavioral Dimension of the Climate

The behavioral dimension of the climate generally has been assessed using reports of interactions or contact experiences between and among different groups, participation (or lack thereof) in campus programs and diversity activities, and enrollment in diversity courses. In most cases, measures of the behavioral dimension are an attempt to assess intergroup relations on a campus or level of engagement with diversity.

Since the first review of the literature on the behavioral dimension of the climate (Hurtado et al., 1999), several advancements in this research have occurred. First, studies are beginning to distinguish *informal interactions* (inside and outside of the classroom) from engagement with diversity that is *campus-facilitated* (specific diversity coursework, events, programs, interventions) (Gurin et al., 2002; Hurtado, 2005). The types of behaviors that reflect engagement in *campus-facilitated* interactions with diversity, or institutional diversity practices, are addressed in the next section of this paper focusing on institutional practice. This section of the paper addresses *informal interactions* between peers.

The second major development in behavioral climate research is that studies have moved from examining measures of the frequency of interactions with diverse peers (Chang, 1999; Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1996), toward assessing the quality of interactions (both positive and negative) in a variety of contexts (Gurin et al., 2002; Sáenz, 2005; Sáenz, Ngai, & Hurtado, 2007). Third, as noted previously, most studies are finding that more interactions across race/ethnicity take place in increasingly diverse environments (Chang, 1999; Chang, Astin, & Kim, 2004; Pike & Kuh, 2006); however, the quality of those cross-racial interactions during college is often determined by whether students had informal interactions with various groups before college (Sáenz, 2005; Sáenz et al., 2007). These findings about the quality of contact experiences and "perpetuation effects" in college were only made possible when researchers began to work longitudinally, assessing initial predispositions and behaviors in high school or at college entry, intergroup behaviors during college, and behaviors and beliefs after college (Jayakumar, 2007; Sáenz, 2005). This highlights the value of longitudinal assessments, and has enhanced modeling of how student intergroup behaviors are reinforced or disrupted during college. It is likely that a cross-sectional survey of college students' interactions with diverse peers will reveal a portrait of students' diversity habits and behaviors acquired before college. Thus, when designing measures to assess the value of interventions that facilitate interactions with diversity, controls for behaviors at college entry must be included.

A fourth development in the literature is that those studies employing separate group analyses have uncovered unique cross-racial interaction patterns for specific groups (Chang et al., 2004; Sáenz et al., 2007). This research closely parallels much of the work on group differences in perceptions of psychological climate referenced earlier. As the composition of a college begins to change, intergroup relations and interactions with diverse peers on campus is certainly an area that calls for increased assessment efforts. Finally, the inclusion of behavioral measures on surveys, which tap into student interactions with diversity while in college, has allowed researchers to establish that cross-racial interaction is important to facilitating a wide range of educational outcomes (Antonio, 2001; Antonio, Chang, Hakuta, Kenny, Levin, & Milem, 2004; Chang et al., 2006; Gurin et al., 2002; Gurin, Lehman, & Lewis, 2004; Hurtado, 2005; Pascarella, Palmer, Moye, & Pierson, 2001; Pike & Kuh, 2006; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001). The research assembled as part of the University of Michigan affirmative action cases (*Gratz et al. v. Bollinger et al.*, 2003; *Grutter et al. v. Bollinger et al.*, 2003), and subsequent research has consistently confirmed the value of informal interactions with diverse peers during college.

Although the National Study of Student Learning (Pascarella et al., 1996; Whitt et al., 2001) included some questions regarding campus climate (with a limited national sample), the only large-scale, multicampus survey at the outset of those affirmative action cases that had significant questions regarding issues of the psychological and behavioral climate were those administered by the CIRP, beginning in 1989. The University of Michigan also began its own comprehensive institutional assessment in 1990. The Michigan Student Study highlighted the value of climate assessments for institutional use, not only in assessing a strategic initiative (the Michigan Mandate for Diversity), but also in subsequent legal challenges. Although the focus on psychological climate in both of these surveys helped identify issues faced by underrepresented students on diverse college campuses (Hurtado, 1992; see the initial Michigan Study report), these surveys were also used in the University of Michigan Supreme Court cases to show how cross-racial interaction is associated with ongoing educational benefits,

enabled by the study's longitudinal design (including 4 and 9 year follow-ups of alumni) and the incorporation of distinct educational outcomes (e.g., academic motivation, skills, and civic engagement) (see Gurin, 1999). Without question, a stronger link has been made with

Table 1
Framework of Campus Facilitated Diversity Initiatives

Major categories	Description	Subcategories	Goals
Academic Support Initiatives	Retention services for underrepresented students	Mentoring and Advising Tutoring	To ensure that students of underrepresented populations have the necessary support in order to be academically successful
Co-curricular Initiatives	Educational programs and activities which occur outside of the formal classroom	Rituals and Celebrations Workshops and Retreats Student Organizations Intergroup Dialogues	To increase awareness of self, others, and self in relationship to others
Curricular Initiatives	Initiatives that affect the teaching, learning, and knowledge generation within the academic realm of the institution	Faculty Research Cultural Academic Programs and Concentrations Academic Departmental Strategic Initiatives Certificate Programs Race/Ethnicity Requirements	To enhance and expand the existing knowledge of multiculturalism and pluralism in today's society
Community Outreach Initiatives	Initiatives that connect and partner members of the institution with the surrounding community	Internships Assisting Under-Served Populations Community Partnerships Volunteer-Work Programs for High School Students Distance Education for Under-Served Populations	To increase awareness of how individuals can change and improve the economic and social inequities that exist locally and nationally
"Safe Space" Initiatives	Initiatives designed to provide space for the increased comfort-level of underrepresented populations on campus	Comprehensive Support and Learning Centers (Multicultural and Social Identity-Group specific) Residence Hall Initiatives (e.g. multicultural staff positions or hall space designated for social identity groups)	To provide "insider" environments for students who typically experience "outsider" level status on their campuses through academic and social support
Integrative Learning Initiatives	Initiatives that involve multiple units for the cognitive, interpersonal, and intrapersonal development of students	High School to College Initiatives Comprehensive Learning Programs Study Abroad Experiences Residential Living/Learning Programs Service-Learning Programs	To combine the knowledge and expertise of faculty, staff, and community members in order to enhance the educational process for students
Institutional Strategic Initiatives	Initiatives created by the top-levels of institutional governance for campus-wide transformation	Policy Initiatives Curriculum Transformation Projects Institutional Research Activities Advisory Groups and Task Forces Presidential Strategies Employee Training Centers	To enhance the student experience through the full inclusion of the unique and valuable perspectives of all of the members of campus

cross-racial interactions (the behavioral dimension of the climate) and student outcomes, enhancing our ability to understand the value of diverse peers in academic environments. Moreover, the comprehensiveness of these surveys and their use to study student outcomes raised the bar in terms of how climate assessments were valuable and could be utilized in the future.

Campus-Facilitated Interactions and Diversity Practice in Climate Surveys

Most of the literature reviewed up to this point, particularly in relation to behavioral climate, has focused on students' informal interactions with diverse peers. It seems a valuable use of climate assessments would be to also understand the impact of campus-facilitated experiences intended to improve student engagement with diversity, disrupt stereotypical attitudes and behaviors, and enhance student learning. We used a framework for the review of diversity practices that originated from a national research project titled, *Preparing Students for a Diverse Democracy* (Hurtado, 2003). Ten participating public institutions were asked to produce a full accounting of campus programs, courses, and events that promote diversity as a learning tool. Table 1 summarizes the classification of campus facilitated diversity initiatives into both broad categories and subcategories based on the goals of the diversity initiatives. The broad categories of the typology include: institutional strategic initiatives, community outreach initiatives, academic support initiatives, curricular initiatives, co-curricular initiatives, "safe space" initiatives (identity and awareness programs for target groups), and integrative learning initiatives. Although initiatives within a subcategory may not be exclusive to one major category, the initiatives' primary learning goals were considered in their placement within this framework.

To inform the validity of this framework in relation to current diversity practices, websites for national conference presentations committed to diversity and learning were reviewed to understand the ongoing conversations related to practice. Conference workshops and presentations related to campus diversity practices over the last 3 years were classifiable into at least one of the broad categories of the typology. Very few fell outside of the framework, lending fur-

ther credence to its classification of actual campus practices and interventions related to diversity. The typology thus provided a conceptual framework from which practices related to diversity were reviewed in the literature and in surveys.

We reviewed the literature and more than 90 surveys to understand the extent to which assessments of these diversity practices were evident. While reviewing the literature in each area of practice is beyond the scope of this article, suffice it to say evidence on specific diversity-related practices is inconsistent. The four most consistent areas captured in the literature based on student surveys to date are: diversity in the curriculum (Chang, 2002a; Gurin et al., 2002; Hurtado, 2005; Maruyama, Moreno, Gudeman, & Marin, 2000; Mayhew & DeLuca Fernandez, 2007; Mayhew & Grunwald, 2006; Nelson Laird, 2005; Terenzini, Cabrera, Colbeck, Bjorklund, & Parente, 2001); co-curricular programs, such as intergroup dialogue (Nagda, 2006; Nagda, Kim, & Truelove, 2004; Nagda & Zúñiga, 2003); involvement in other student activities (Aberson, 2007; Cheng & Zhao, 2006; Sáenz et al., 2007; Whitt et al., 2001; Zúñiga, Williams, & Berger, 2005); and integrative initiatives in the form of service-learning or living learning programs (Astin & Sax, 1998; Astin, Sax, & Avalos, 1999; Inkelas, Vogt, Longerbeam, Owen, & Johnson, 2006; Longerbeam & Sedlacek, 2006; Muthuswamy, Levine, & Gazel, 2006; Pike, 2002). Survey items capturing elements of diversity practices were represented in 64 (70%) of the surveys we reviewed, the rest neglected to ask any questions about diversity-related practices. Within these 64 surveys, 85% addressed practice in a minimal manner (less than 10% of the survey items), typically focusing mainly on participation in diversity-related courses. The other 15% of surveys incorporated at least more than one practice-related item set that tapped into a variety of campus-facilitated initiatives. Unless a climate survey was specifically designed with the evaluation of program participation and educational activities in mind (e.g., University of Massachusetts Gay, Lesbian, Bisexual, and Transgender Issues Survey), many surveys tended to overlook the opportunity to obtain more information about campus-facilitated interventions and practice. Only two multicampus surveys (Preparing College Students for a Di-

verse Democracy, administered at 10 campuses and The Campus Life in America Survey, administered on six campuses) were specifically focused on diversity and systematically investigated specific campus diversity practices. However, these were administered only once longitudinally, as part of externally funded projects. Our knowledge base about specific diversity initiatives is at a nascent stage, and institutional investment in diversity initiatives is significant. If we hope to create the conditions that improve the climate for diversity on campus, we will need to capture more information in assessments about specific interventions that facilitate contact and provide educational or enlightenment experiences (Dovidio, Gaertner, Stewart, Esses, Ten Vergert, & Hodson, 2004).

Assessing the Campus Climate, Educational Outcomes, or Both?

In our overview of instruments, we found that outcomes were not typically the focus of climate surveys. Approximately 38 (42%) of the surveys we reviewed assess outcomes extensively (at least one out of every four survey items were related to outcomes). Nineteen surveys include between 10% and 25% of their items as outcomes, while another 16 surveys touch on outcomes only minimally (less than 10% of the survey items), and the remaining 18 do not evaluate outcomes at all. Most climate assessments attempted to take the "pulse" of the institution or student body to determine the level of tension or intergroup conflict (e.g., CSU San Bernardino–Campus Diversity Issues Questionnaire, 1994; University of North Carolina, Charlotte–Campus Climate Survey, 1995; University of Texas, Austin–Quality of Student Life Survey, n.d.). The value of these surveys is to provide immediate information to understand the level of tension or intergroup relation dynamics on a campus, but offer little insight into the ways climate is influencing student outcomes. As one college president put it, a climate assessment is needed to find out if racial incidents and intergroup conflicts are isolated experiences or are "just the tip of the iceberg" in terms of the diversity issues on a campus.

Perhaps one of the greatest contributions of climate research to date has been its link with educational outcomes to understand the impact of both subtle forms of discrimination (the psy-

chological climate) and the value of interaction with diverse peers or contact experiences during college (the behavioral climate and intergroup relations). For many campuses, it is not simply a matter of whether groups differ in terms of perceptions and behavior, but rather, whether these differences affect learning, achievement, aspirations, and multicultural citizenship competencies over the long and short term. The most recent work in this area ties both psychological and behavioral dimensions of the climate with progress in scientific disciplines to explore how underrepresentation is experienced in those fields and how it affects a student's successful transition to college and retention in the major (Chang, Cerna, Han & Saenz, 2008; Hurtado et al., 2007) using the Your First College Year survey (HERI), which now regularly taps into a range of diversity questions. The work attempting to employ survey measures of stereotype threat is also relevant for understanding transition outcomes in racially isolating contexts (Massey, Charles, Lundy, & Fischer, 2003). Although the Massey et al. study is one of the few attempts at using survey data to study the impact of stereotype threat, the survey used was administered only once as part of a funded research project.

Several national surveys (e.g., National Study of Student Engagement, ACT College Outcomes Survey, ACT Student Opinions Survey) have also been used in diversity research and efforts to assess student outcomes. While offering opportunities for comparing institutions, using these surveys can be challenging in several ways. First, these surveys have been designed to measure the student experience broadly, including questions about a wide variety of topics on study habits, engagement in campus activities, academic interests, and interactions with faculty. Most do not investigate the quality of the campus racial climate in great depth. Items assessing campus racial climate are often more general overall assessments measured in less than a handful of items, rather than attending to the multiple dimensions of climate through the development of constructs based on several survey items. This lack of depth makes it difficult to make connections between the multiple aspects and dimensions of climate and student outcomes. Moreover, these surveys have an inconsistent emphasis on student outcomes. On 11 of the 19 national student surveys we

assessed, less than 15% of the questions addressed student outcomes. Further, national surveys tend to focus on a traditional set of learning outcomes, rather than the competencies required for engagement in a multicultural society.

The only multicampus assessment instrument that extensively taps into experiences and attitudes about a variety of social identity groups (based on race, gender, sexual orientation, and disability) is administered by EBI (Climate Survey V.8). Unfortunately, this survey also has a limitation in that it employs a weak approach to the study of outcomes—directly asking students to assess the impact or value of diversity. Many students are not likely to have reflected extensively on how they benefit from diversity, and these responses vary by social identity group.

A few instruments have developed a hybrid model—extensively assessing multiple dimensions of the climate as well as outcomes necessary for participating in a diverse and global society. Following the example set by the social science evidence presented in the Michigan cases, these surveys include the Preparing College Students for a Diverse Democracy Survey, 2002 (also known as the Diverse Democracy Project), the Campus Life in America Survey, and recent modifications to the College Senior Survey and Your First College Year (HERI). Only the latter two surveys are available to all college campuses on an annual basis. Building on previous research, these "hybrid"

surveys attempt to capture a new set of outcomes framed to address critical issues in multicultural society. For example, the development of a pluralistic orientation scale (Engberg, 2007; Engberg, Hurtado, & Smith, 2007; Jayakumar, 2007) is now on the national surveys, although its origin was the Diverse Democracy project. Yet, even in the case of the HERI surveys, space limitations prevent a more in-depth assessment of a variety of diversity-related outcomes along with outcomes typically assessed longitudinally (e.g., aspirations, changing values, self-concept).

Table 2 introduces a new framework for the variety of outcome constructs captured in these "hybrid" surveys as well as previous literature on outcomes associated with preparation for a diverse and global society. The framework originated from both studying the concept maps of several surveys and the literature linking diversity with a wide variety of outcomes in studies of college students. The thinking behind this framework of outcomes is to illustrate how scholars and institutional researchers are beginning to capture *cognitive* skills (students' thinking skills), *socio-cognitive* outcomes (dispositions that incorporate both social awareness), skills and dispositions for *multicultural citizenship* (ability to interact with a variety of social identity groups), and *values* and *attitudes* (tolerance and beliefs about diversity issues and topics).

Recent work in student development theory suggests that development occurs along cogni-

Table 2

Framework of Student Outcomes From Survey-Based Climate Assessments

Cognitive	Socio-cognitive	Citizenship in a multicultural society	Values and attitudes
Analytical problem-solving	Leadership skills	Pluralistic orientation	Civic values
Critical thinking	Cultural awareness	Civic contributions	Commonality of values with different groups
Openness to diversity and challenge	Social identity awareness	Interest in equity and social justice issues	Tolerance of differences
Attributional complexity	Self-efficacy for social change	Voting behavior	Attitudes towards different identity groups
Socio-historical thinking	Perspective-taking skills	Political involvement/interest	
Knowledge about different racial/ethnic groups	Reduction of intergroup anxiety	Social action engagement	
	Social awareness	Conceptions of a democracy	
	Intellectual and social self-confidence		

tive, intrapersonal (e.g., identity), and interpersonal (e.g., ability to consider others and manage difference) domains for individuals who are interculturally mature (King & Baxter Magolda, 2005). Although this model of student development has not yet been linked with actual measures of outcomes, it is important in that it highlights the fact that developmental scholars, college impact researchers, and practitioners are beginning to converge on the value of assessing a set of outcomes associated with diversity. Moreover, it is important to note the interrelated nature of these outcomes. As King and Baxter Magolda (2005) emphasize, each area tends to build on the other. For example, the formation of attitudes has much to do with students' cognitive development and interpersonal skills in contact with a variety of communities.

The framework presented in Table 2 differs from previous frameworks used to categorize college outcomes (Astin, 1993; Pascarella & Terenzini, 2005), and expands the most recent framework of Essential Learning Outcomes to guide college practice that was introduced by Association of American Colleges and Universities, 2007. It is intended to give more focus to the skills, competencies, and knowledge that frame personal and social responsibility in a multicultural society. It should be acknowledged that these outcomes are articulated as key aspects of preparing students for the social complexities of diversity and decision-making in a pluralistic society marked by continuing issues of conflict and inequality. Institutions may wish to identify several of these outcomes for assessment in addition to the full range of outcomes of student and institutional performance.

It is important to note that many climate surveys do not have a broad range of outcomes, but are more likely to assess respondent attitudes on a variety of diversity topics (e.g., Loyola Marymount University–Building an Intercultural Campus Climate Survey, 2000; Texas A&M University–Campus Climate Survey, 1997; University of Michigan–Diversity in the College Community: A Survey of Student Opinions and Experiences, n.d.). The study of attitudes, and racial attitudes in particular, has a long history dating back to the landmark work of Gordon Allport (1954). This body of literature includes many instruments, concepts, and measures developed since that time (Pettigrew, 1998). Instruments developed for use on college campuses to study racial attitudes or attitudes about diversity issues have borrowed heavily from this rich tradition of social science research. If campuses desire to examine attitudes as part of their climate assessment, it may be considered one aspect of the psychological dimension of the climate that explains the level of group conflict and influences contact experiences on a campus.

Nevertheless, it can be argued that changing racial attitudes is a key rationale for introducing educational activities that increase student knowledge about various social identity groups, inequality in American society, and the development of tolerance for living in a pluralistic society. For example, initial attitudes at college entry about LGBT peers significantly influenced interactions with LGBT peers during college (Engberg et al., 2007), and contact experiences during college influence changes in subsequent attitudes (Engberg et al., 2007; Kardia, 1996). Moreover, improving faculty attitudes may be critical to improving the climate for student learning. An important area of development for research on college campuses would be to extend the examination of attitudes among faculty and students about race, gender, ethnicity, and sexual orientation to link with other important educational outcomes (Milem, 1992). Understanding attitudes and beliefs are the first step in not only understanding conflict and resistance on campus, but also in preparing students to acquire the essential skills for interacting in a diverse and global world (Hurtado, 2007; Clayton-Pedersen, Parker, Smith, Moreno, & Teraguchi, 2007).

Several diversity-related surveys are now designed to go beyond assessing values and attitudes to examine students' thinking or cognitive skills, with researchers investigating these issues using measures of dispositions for critical or complex thinking (e.g., Student Thinking and Interacting Classroom Surveys–Diverse Democracy Project). Researchers have linked aspects of the psychological and behavioral dimensions with cognitive outcomes such as analytical problem-solving (Hurtado, 2005; Terenzini et al., 2001), critical thinking (Hurtado, 2001; Hurtado, 2005; Pascarella et al., 2001), openness to diversity and challenge of their own beliefs (Pascarella et al., 1996; Summers, Svinicki, Gorin, & Sullivan, 2002; Whitt et al., 2001), attributional complexity or more

complex explanations of other people's behavior (Hurtado, 2005), and integrative complexity (Antonio, Chang, Hakuta, Kenny, Levin, & Milem, 2004). Furthermore, researchers are using surveys to investigate how diversity is related to differences in students' thinking and reasoning skills.

Socio-cognitive outcomes are those skills and dispositions that imply more awareness of interpersonal relations across groups that involve both cognitive abilities and social awareness, or an individual and social component. These include changes in cultural awareness, leadership skills, perspective-taking skills (Antonio, 2001; Astin, 1993; Hurtado, 2005; Hurtado, Engberg, Ponjuan, & Landreman, 2002), and reduction of intergroup anxiety (Stephan & Stephan, 1989). Several surveys have begun to tap into social identity awareness and group-based identities (the Michigan Study and Diverse Democracy Project surveys), or an understanding of self in relation to others. These types of measures also involve assessments of interpersonal skill development.

Another domain, which we term citizenship in a multicultural society, can be understood as a set of skills and abilities to interact with a variety of social identity groups and to make decisions in a society marked by difference. Survey research on college students has begun to tap into students' development of a pluralistic orientation—skills and abilities to participate in diverse workplaces (Engberg, 2007; Hurtado, 2005), interest in equity issues, and civic commitments and behaviors. It implies a level of commitment evidenced in behavior in a diverse democracy. Additionally, aspects of this outcome dimension include social action engagement (Hurtado, 2002; Nelson Laird, Engberg, & Hurtado, 2005), and conceptions of a democracy (Hurtado et al., 2002).

It is important to note the interrelated nature of these outcomes, as King and Baxter Magolda (2005) emphasize, although it makes it very difficult to categorize outcomes into any one domain. For example, the formation of attitudes has much to do with students' cognitive development as it does with interpersonal skills in contact with a variety of communities. Advanced levels of cognitive development are necessary for greater social awareness and commitments. Further examination of these outcomes measures is likely in the near future as institutions and scholars attempt to understand how their educational programs and interventions prepare students for a diverse society.

The Future of Diversity and Climate Research

We have introduced three frameworks to summarize the features and trends in research designed to assess the dynamic aspects of diversity on college campuses. Our analysis integrating an examination of the literature on diversity on college campuses and over 90 surveys using the climate, practice, and outcomes frameworks suggest a great deal about the current state of diversity research and assessment. In addition to reminding us of what we now consider empirical knowledge about campus diversity, our review also highlights several gaps in our understanding, suggesting that efforts to more holistically assess climate, practices, and outcomes across multiple campuses are required to further our knowledge base and improve practice.

First, although there is a well-developed literature base, there is much that remains unknown about the nature and influence of campus racial climate. For example, few studies and surveys have assessed the climate as a multidimensional construct. We are just beginning to understand how the dimensions identified within the campus racial climate framework interact with one another to create an environment that fosters or stifles student growth. Additionally, most campus racial climate research has been conducted with students as the unit of analysis, comparing the perspectives and outcomes of White students to either Black students specifically or students of color broadly. The impact of campus climate on specific communities of color must be explored in greater depth. For example, among the target-specific instruments, none were specifically focused on Asian American or Native American student communities. Therefore, in addition to expanding our understanding of the experiences of Black and White students, the continued plight of Native Americans, and the specific problems faced by Asian American and Latino students in American higher education are worthy of additional emphasis.

Multi-institutional surveys that provide normative comparison groups are important for

campuses to evaluate how they are progressing on diversity goals. However, comparing and assessing multiple groups on a single campus is also important for a deeper examination of their experiences with the multicultural learning environment on a specific campus. The majority of the climate studies and surveys focus on students, with only a handful of single-institution staff surveys identified. Greater attention to the development of multi-institutional and national surveys that add to our understanding of the climate for other community members such as faculty, administrators, and staff is certainly warranted and needed. Campuses that can comprehensively assess their communities will get a better notion of how staff, faculty, and students experience the campus environment, their degree of marginalization, and levels of interaction between these different groups.

Importantly, today's campuses are more committed to investigating a wider spectrum of diversity issues that involve multiple communities and the intersectionality of social identities. As noted previously, "diversity" is used almost exclusively to refer to race and/or ethnicity. Today's social discourse requires an expansion of how we study diversity on a campus to include differences in gender, age, socioeconomic status, physical ability, sexual orientation, religion, and geographic or cultural origins that are found throughout our nation's campuses. Future efforts to assess diversity, equity, and climate must be more inclusive of difference that extends beyond race and ethnicity. One must be cognizant of the differentials in power and privilege that exist on a campus. This may only be assessed if our campuses research and our instruments address these issues.

This review also speaks to the state of research and assessment of institutional initiatives designed to facilitate intergroup interactions, relationships, and learning. The practice-focused framework developed based on the *Diverse Democracy Project* research and our evaluation of diversity surveys provided a means to structure the various kinds of diversity-related practices that colleges and universities are providing for their student populations. However, this framework also exposed gaps in the literature between actual practices and the amount of research available on these diversity initiatives. Which interventions improve the climate on campus? Which initiatives have the same effect

on a variety of student outcomes? Although some research exists on aspects of each major diversity category (Hurtado, 2005), there is a need for a more comprehensive understanding of how these initiatives work and of their impact, developed through careful evaluation and assessment. Institutions have an opportunity to incorporate elements of their practices in survey research that fit the unique needs of their campus community, which in turn, supports their efforts and strategies to improve campus climate and student outcomes.

Our recommendations around improving the assessment of practice naturally turn our attention to the evaluation of student outcomes. The development of longitudinal measures that determine the impact of the educational environment and institutional practices provide crucial information for facilitating important student outcomes. We proposed a new framework of student outcomes, integrating a set of skills necessary for personal and professional success in an increasingly diverse nation. Colleges and universities produce a host of educational outcomes that are well-documented (Pascarella & Terenzini, 2005), and advancing social progress is one of higher education's most important outcomes (Bowen, 1997). The new framework of diversity outcomes offers a list of student competencies, values, skills, and dispositions that will allow us to determine how and whether institutions are meeting these community-related goals. Colleges should move toward a more comprehensive set of outcomes including not only the traditional ones we typically monitor, but also the skills and abilities to become a citizen in a multicultural society. One approach may be the use of multiple instruments and sources of outcome data, as there is no single instrument ideally suited to capture a wide range of college outcomes currently.

Finally, our review speaks to challenges in the instruments utilized to assess climate. Although we were able to collect a fairly comprehensive set of surveys used in diversity studies across the nation, it is difficult to determine whether and when particular instruments were used in the campus racial climate literature because specific institutions (or survey instruments) are rarely identified to maintain institutional anonymity. Institutionally devised surveys help determine how the climate is perceived within a particular context; yet, they

are so institution-specific that they may not be easily generalized beyond that campus. Instruments used in these studies are seldom validated, and when they are, they are validated only using individuals at the campus under study. This enables us to determine how different groups on one campus perceive and are affected by climate, but limits our ability to compare perceptions of climate across campuses. The development of an instrument that can be used at individual campuses nationwide can provide a micro as well as a macro level understanding of diversity at American colleges and universities. The most extensive "hybrid model" instruments that capture a wide range of climate, practice, and outcome constructs are useful examples of such surveys; yet, their use is currently limited to a handful of campuses. To see the "big picture" and thoroughly understand the campus environment in its entirety, student outcomes, campus climate, and institutional practices must be examined and assessed in comprehensive ways, integrating evaluations of these three components of diversity into one survey or used in combination with other instruments. Only then will a campus be able to identify how the dynamics of diversity shapes their work and learning environment, and subsequently impacts outcomes for members of their community. Developing a comprehensive national survey that encompasses these various components of campus diversity will truly prove to be beneficial in addressing the lingering questions about diversity and climate as we strive to prepare a new generation of leaders.

Campuses that wish to make progress in becoming functional multicultural learning environments now have a vast amount of empirical information to guide practice but nothing can replace critical self-assessment to deepen the commitment to diversity on a campus. At one time, climate assessments were used as one-shot portraits—the solution to a "problem" with diversity instead of the catalyst for change. Their empirical value has risen as a result of systematic study, and campuses committed to "inclusive excellence" have now determined that a good understanding of the climate should be the first step in campus-wide planning as well as intentional educational activity inside and outside of the classroom. Campus administrators must find new and better ways to convert the vast amount of information we collect on campus diversity into institutional action, as we are now more aware of the consequences of institutional neglect. Advancing student skills to become competent, multicultural citizens will also advance higher education's mission to advance social progress in the next generation.

References

Aberson, C. L. (2007). Diversity experiences predict changes in attitudes toward affirmative action. *Cultural Diversity & Ethnic Minority Psychology, 13,* 285–294.

Allport, G. (1954). *The nature of prejudice.* Reading, MA: Addison Wesley.

Ancis, J. R., Sedlacek, W. E., & Mohr, J. J. (2000). Student perceptions of campus cultural climate by race. *Journal of Counseling and Development, 78,* 180–185.

Antonio, A. L. (2001). The role of interracial interaction in the development of leadership skills and cultural knowledge and understanding. *Research in Higher Education, 42,* 593–617.

Antonio, A. L., Chang, M. J., Hakuta, K., Kenny, D. A., Levin, S., & Milem, J. F. (2004). Effects of racial diversity on complex thinking in college students. *Psychological Science, 15,* 507–510.

Association of American Colleges and Universities (2007). College learning for the new global economy. Washington, D.C.: Author.

Astin, A. W. (1993). *What matters in college? Four critical years revisited.* San Francisco: Jossey-Bass.

Astin, A. W., & Sax, L. J. (1998). How undergraduates are affected by service participation. *Journal of College Student Development, 39,* 251–263.

Astin, A. W., Sax, L. J., & Avalos, J. (1999). The long-term effects of volunteerism during the undergraduate years. *Review of Higher Education, 22,* 187–202.

Bensimon, E. M. (2004). The diversity scorecard: A learning approach to institutional change. *Change, January/February,* 45–52.

Bowen, H. R. (1997). *Investment in learning: The individual and social value of American higher education.* Baltimore: Johns Hopkins University Press.

Cabrera, A. F., & Nora, A. (1994). College student perceptions of prejudice and discrimination and their feelings of alienation: A construct validation approach. *Review of Education/Pedagogy/Cultural Studies, 16,* 387–409.

Cabrera, A. F., Nora, A., Terenzini, P. T., Pascarella, E., & Hagerdorn, L. S. (1999). Campus racial climate and the adjustment of students to college: A comparison between White students and Afri-

can-American students. *The Journal of Higher Education, 70,* 134–160.

Chang, M. J. (1999). Does racial diversity matter?: The educational impact of a racially diverse undergraduate population. *Journal of College Student Development, 40,* 377–395.

Chang, M. J. (2002a). The impact of an undergraduate diversity course requirement on students' racial views and attitudes. *Journal of General Education, 51,* 21–42.

Chang, M. J. (2002b). Preservation or transformation: Where's the real educational discourse on diversity? *Review of Higher Education, 25,* 125–140.

Chang, M. J., Astin, A. W., & Kim, D. (2004). Cross-racial interaction among undergraduates: Some consequences, causes, and patterns. *Research in Higher Education, 45,* 529–553.

Chang, M. J., Cerna, O., Han, J., & Sáenz, V. (2008). The contradictory roles of institutional status in retaining underrepresented minorities in biomedical and behavioral science majors. *The Review of Higher Education, 31,* 433–464.

Chang, M. J., Denson, N., Sáenz, V., & Misa, K. (2006). The educational benefits of sustaining cross-racial interaction among undergraduates. *Journal of Higher Education, 77,* 430–455.

Cheng, D. X., & Zhao, C. M. (2006). Cultivating multicultural competence through active participation: Extracurricular activities and multicultural learning. *NASPA Journal, 43,* 13–38.

Clayton-Pedersen, A. R., Parker, S., Smith, D. G., Moreno, J. F., & Teraguchi, D. H. (2007). *Making a real difference with diversity: A guide to institutional change.* Washington DC: AAC&U Publications.

Cress, C. M., & Ikeda, E. K. (2003). Distress under duress: The relationship between campus climate and depression in Asian American college students. *NASPA Journal, 40,* 74–97.

Cureton, S. (2003). Race-specific college student experiences on a predominantly White campus. *Journal of Black Studies, 33,* 295–311.

Dovidio, J. F., Gaertner, S. L., Stewart, T. L., Esses, V. M., Ten Vergert, M., & Hodson, G. (2004). From intervention to outcome: Processes in the reduction of bias. In W. Stephan, & W. Vogt (Eds.), *Education programs for improving intergroup relations: Theory, research, and practice* (pp. 243–265). New York: Teachers College Press.

D'Augelli, A. R., & Hershberger, S. L. (1993). African American undergraduates on a predominantly White campus: Academic factors, social networks, and campus climate. *The Journal of Negro Education, 62,* 67–81.

Eimers, M. T., & Pike, G. R. (1997). Minority and nonminority adjustment to college: Differences or similarities? *Research in Higher Education, 38,* 77–97.

Engberg, M. E. (2004). Improving intergroup relations in higher education: A critical examination of the influence of educational interventions on racial bias. *Review of Educational Research, 74,* 473–524.

Engberg, M. E. (2007). Educating the workforce for the 21st century: A cross-disciplinary analysis of the impact of the undergraduate experience on students' development of a pluralistic orientation. *Research in Higher Education, 48,* 283–317.

Engberg, M. E., Hurtado, S., & Smith, G. (2007). Developing attitudes of acceptance toward lesbian, gay, and bisexual peers: Enlightenment, contact, and the college experience. *Journal of Gay & Lesbian Issues in Education, 4,* 49–77.

Gratz et al. v. Bollinger et al., 530 U.S. (2003).

Grutter et al., v. Bollinger et al., 539 U.S. (2003).

Gurin, P. (1999). Expert report. *"Gratz et al. v. Bollinger, et al."* No. 97–75321 (Ed. Mich.); *"Grutter, et al. v. Bollinger, et al."* No. 97–75928 (Ed. Mich.) (Vol. 32, pp. 36–62).

Gurin, P., Dey, E. L., Hurtado, S., & Gurin, G. (2002). Diversity and higher education: Theory and impact on educational outcomes. *Harvard Educational Review, 72,* 330–367.

Gurin, P., Lehman, J. S., Lewis, E., Dey, E. L., Gurin, G., & Hurtado, S. (2004). *Defending diversity: Affirmative action at the University of Michigan.* Ann Arbor: University of Michigan Press.

Harper, S. R., & Hurtado, S. (2007). Nine themes in campus racial climates and implications for institutional transformation. *New Directions for Student Services, 120,* 7–24.

Hurtado, S. (1992). The campus racial climate: Contexts of conflict. *The Journal of Higher Education, 63,* 539–569.

Hurtado, S. (1994). The institutional climate for talented Latino students. *Research in Higher Education, 35,* 21–41.

Hurtado, S. (2001). Linking diversity and educational purpose: How diversity affects the classroom environment and student development. In G. Orfield (Ed.), *Diversity challenged: Evidence on the impact of affirmative action* (pp. 187–203). Cambridge: Harvard Education Publishing Group.

Hurtado, S. (2002). Creating a climate of inclusion: Understanding Latina/o college students. In W. A. Smith, P. G. Altbach, & K. Lomotey (Eds.), *The racial crisis in American higher education: Continuing challenges for the twenty-first century* (pp. 121–136). Albany, NY: SUNY Press.

Hurtado, S. (2003). *Preparing college students for a diverse democracy: Final report to the U.S. Department of Education.* Ann Arbor, MI: Center for the Study of Higher and Postsecondary Education.

Hurtado, S. (2005). The next generation of diversity and intergroup relations research. *Journal of Social Issues, 61,* 595–610.

Hurtado, S., & Carter, D. F. (1997). Effects of college transition and perceptions of the campus racial climate on Latino college students' sense of belonging. *Sociology of Education, 70,* 324–345.

Hurtado, S., Carter, D. F., & Kardia, D. (1998). The climate for diversity: Key issues for institutional self study. *New Directions for Institutional Research, 98,* 53–63.

Hurtado, S., Carter, D. F., & Spuler, A. (1996). Latino student transition to college: Assessing difficulties and factors in successful college adjustment. *Research in Higher Education, 37,* 135–157.

Hurtado, S., Engberg, M. E., Ponjuan, L., & Landreman, L. (2002). Students' precollege preparation for participation in a diverse democracy. *Research in Higher Education, 43,* 163–186.

Hurtado, S., Han, J. C., Sáenz, V. B., Espinosa, L., Cabrera, N., & Cerna, O. (2007). Predicting transition and adjustment to college: Biomedical and behavioral science aspirants' and minority students' first year of college. *Research in Higher Education, 48,* 841–887.

Hurtado, S., Maestas, R., Hill, L., Inkelas, K., Wathington, H. D., & Waterson, E. (1998). *Perspectives on the climate for diversity: Findings and suggested recommendations for the Texas A & M. University Campus community.* Ann Arbor, MI: Center for the Study of Higher and Postsecondary Education.

Hurtado, S., Milem, J. F., Clayton-Pedersen, A., & Allen, W. R. (1998). Enhancing campus climates for racial/ethnic diversity: Educational policy and practice. *The Review of Higher Education, 21,* 279–302.

Hurtado, S., Milem, J. F., Clayton-Pedersen, A. R., & Allen, W. R. (1999). *Enacting diverse learning environments: Improving the campus climate for racial/ethnic diversity.* ASHE/ERIC Higher Education Reports Series.

Hurtado, S., & Ponjuan, L. (2005). Latino educational outcomes and the campus climate. *Journal of Hispanic Higher Education, 4,* 235–251.

Hutado, S. (2007). The study of college impact. In P. Gumport (Ed.), *Sociology of higher education* (pp. 94–112). Baltimore: Johns Hopkins University Press.

Inkelas, K. K., Vogt, K. E., Longerbeam, S. D., Owen, J., & Johnson, D. (2006). Measuring outcomes of living-learning programs: Examining college environments and student learning and development. *Journal of General Education, 55,* 40–76.

Jayakumar, U. M. (2007). *Can higher education meet the needs of an increasingly diverse society and global marketplace?: Campus diversity and cross-cultural workforce competencies.* Unpublished dissertation, University of California at Los Angeles.

Kardia, D. B. (1996). Diversity's closet: Student attitudes toward lesbians, gay men, and bisexual people on a multicultural campus. *Dissertation Abstracts International, 57.* (AAT 9624642).

King, P. M., & Baxter Magolda, M. B. (2005). A developmental model of intercultural maturity. *Journal of College Student Development, 46,* 571–592.

Locks, A. M., Hurtado, S., Bowman, N. A., & Oseguera, L. (2008). Extending notions of campus climate and diversity to students' transition to college. *Review of Higher Education, 31,* 257–285.

Longerbeam, S. L., & Sedlacek, W. E. (2006). Attitudes toward diversity and living-learning outcomes among first- and second-year college students. *NASPA Journal, 49,* 40–55.

Lopez, J. D. (2005). Race-related stress and socio-cultural orientation among Latino students during their transition into a predominantly White, highly selective institution. *Journal of Hispanic Higher Education, 4,* 354–365.

Maruyama, G., Moreno, J. F., Gudeman, R. H., & Marin, P. (2000). *Does diversity make a difference? Three research studies on diversity in college classrooms.* Washington, DC: American Council on Education and American Association of University Professors.

Massey, D. S., Charles, C. Z., Lundy, G. F., & Fischer, M. J. (2003). *The source of the river: The social origins of freshmen at America's selective colleges and universities.* Princeton, NJ: Princeton University Press.

Mayhew, M. J., & DeLuca Fernández, S. L. (2007). Pedagogical practices that contribute to social justice outcomes. *Review of Higher Education, 31,* 55–80.

Mayhew, M. J., & Grunwald, H. E. (2006). Factors contributing to faculty incorporation of diversity-related course content. *Journal of Higher Education, 77,* 148–168.

Michigan Student Study. (2008). Downloaded from the Website, March, 2008, http://www.umich.edu/~oami/mss/about/index.htm

Milem, J., Chang, M., & Antonio, A. (2005). *Making diversity work on campus: A research based perspective.* Washington, DC: Association of American Colleges and Universities.

Milem, J. F. (1992). *The impact of college on students' racial attitudes and levels of racial awareness and acceptance.* Unpublished dissertation, University of California at Los Angeles.

Muthuswamy, N., Levine, T. R., & Gazel, J. (2006). Interaction-based diversity initiative outcomes: An evaluation of an initiative aimed at bridging the racial divide on a college campus. *Communication Education, 55,* 105–121.

Nagda, B. A. (2006). Breaking barriers, crossing borders, building bridges: Communication processes in intergroup dialogues. *Journal of Social Issues, 62,* 553–576.

Nagda, B. A., Kim, C., & Truelove, Y. (2004). Learning about difference, learning to transgress. *Journal of Social Issues, 60,* 195–214.

Nagda, B. A., & Zúñiga, X. (2003). Fostering meaningful racial engagement through intergroup dialogues. *Group Processes & Intergroup Relations, 6,* 115–132.

Nelson Laird, T. F. (2005). College students' experiences with diversity and their effects on academic self-confidence, social agency, and disposition toward critical thinking. *Research in Higher Education, 46,* 365–387.

Nelson Laird, T. F., Engberg, M. E., & Hurtado, S. (2005). Modeling accentuation effects: Enrolling in a diversity course and the importance of social action engagement. *Journal of Higher Education, 76,* 448–476.

Nora, A., & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination on the adjustment of minority students to college. *The Journal of Higher Education, 67,* 119–148.

Pascarella, E. T., Edison, M., Nora, A., Hagedorn, L. S., & Terenzini, P. T. (1996). Influences on students' openness to diversity and challenge in the first year of college. *Journal of Higher Education, 67,* 174–195.

Pascarella, E. T., Palmer, B., Moye, M., & Pierson, C. T. (2001). Do diversity experiences influence the development of critical thinking? *Journal of College Student Development, 42,* 257–271.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research.* San Francisco: Jossey-Bass.

Perrucci, R., & Hu, H. (1995). Satisfaction with social and educational experiences among international graduate students. *Research in Higher Education, 36,* 491–508.

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Reviews in Psychology, 49,* 65–85.

Pewewardy, C., & Frey, B. (2002). Surveying the landscape: Perceptions of multicultural support services and racial climate at a predominantly White university. *The Journal of Negro Education, 71,* 77–95.

Pike, G. R. (2002). The differential effects of on- and off-campus living arrangements on students' openness to diversity. *NASPA Journal, 39,* 283–299.

Pike, G. R., & Kuh, G. D. (2006). Relationships among structural diversity, informal peer interactions and perceptions of the campus environment. *The Review of Higher Education, 29,* 425–450.

Rankin, S. R., & Reason, R. D. (2005). Differing perceptions: How students of color and White students perceive campus climate for underrepresented groups. *Journal of College Student Development, 46,* 43–61.

Sáenz, V. B. (2005). *Breaking the cycle of segregation: The effects of pre-college racial environments on students' diversity experiences in college.* Unpublished dissertation, University of California, Los Angeles.

Sáenz, V. B., Ngai, H. N., & Hurtado, S. (2007). Factors influencing positive interactions across race for African-American, Asian-American, Latino, and White college students. *Research in Higher Education, 48,* 1–38.

Smedley, B. D., Myers, H. F., & Harrell, S. P. (1993). Minority-status stresses and the college adjustment of ethnic minority freshmen. *The Journal of Higher Education, 64,* 434–452.

Stephan, W. G., & Stephan, C. W. (1989). Antecedents of intergroup anxiety in Asian-Americans and Hispanic-Americans. *International Journal of Intercultural Communication, 13,* 203–219.

Stephan, W. G., & Stephan, C. W. (1996). Predicting prejudice. *International Journal of Intercultural Relations, 20,* 409–426.

Suarez-Balcazar, Y., Orellana-Damacela, L., Portillo, N., Rowan, J. M., & Andrews-Guillen, C. (2003). Experiences of differential treatment among college students of color. *The Journal of Higher Education, 74,* 428–444.

Summers, J. J., Svinicki, M. D., Gorin, J. S., & Sullivan, T. A. (2002). Student feelings of connection to the campus and openness to diversity and challenge at a large research university: Evidence of progress? *Innovative Higher Education, 27,* 53–64.

Terenzini, P. T., Cabrera, A. F., Colbeck, C. L., Bjorklund, S. A., & Parente, J. M. (2001). Racial and ethnic diversity in the classroom: Does it promote student learning? *Journal of Higher Education, 72,* 509–531.

Thompson, M., & Sekaquaptewa, D. (2002). When being different is detrimental: Solo status and the performance of women and racial minorities. *Analyses of Social Issues and Public Policy, 2,* 183–203.

Whitmire, E. (2004). The campus racial climate and undergraduates' perceptions of the academic library. *Libraries and the Academy, 4,* 363–378.

Whitt, E. J., Edison, M. I., Pascarella, E. T., Terenzini, P. T., & Nora, A. (2001). Influences on student's openness to diversity and challenge in the second and third years of college. *Journal of Higher Education, 72,* 172–204.

Zúñiga, X., Williams, E. A., & Berger, J. B. (2005). Action-oriented democratic outcomes: The impact of student involvement with campus diversity. *Journal of College Student Development, 46,* 660–678.