African American and Hispanic Student Engagement at Minority Serving and Predominantly White Institutions

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Although scholars have examined historically Black colleges and universities (HBCUs) in terms of their educational effectiveness for African American students compared to predominantly white institutions (PWIs), there is a lack of similar research on Hispanic students at Hispanic-serving institutions (HSIs) and PWIs. This study uses data from the 2003 administration of the National Survey of Student Engagement (NSSE) to investigate whether HSIs appear to serve Hispanic students in similar ways that HBCUs serve African American students. The results suggest that the average Hispanic senior at an HSI looks quite similar to the average Hispanic senior at a PWI in terms of engagement, satisfaction with college, and gains in overall development, in contrast to the results for African American seniors who are more engaged at HBCUs than PWIs.

Scholars have illustrated through various studies that the time and energy college students devote to educationally purposeful activities is the greatest predictor of their cognitive and personal development (Astin, 1993; Pace, 1980; Pascarella & Terenzini, 1991, 2005). Although students themselves largely control their levels of this kind of engagement, institutional culture, climate, and practices play a role in determining how and how much students get engaged. In particular, students are more actively engaged in their education, and consequently gain more from their experiences, when they are at institutions that they perceive as inclusive and affirming and where performance expectations are clearly communicated and set at reasonably high levels (Chickering & Reisser, 1993; Education Commission of the States, 1995; Hurtado, Milem, Clayton-Pedersen, & Allen, 1999; Kuh, 2001; Kuh, Schuh, Whitt & Associates, 1991; Pascarella, 2001; Pascarella & Terenzini, 1991, 2005). At predominantly white institutions (PWIs), underrepresented groups on campus, including African American and Hispanic undergraduates, often encounter impediments to their engagement, such as a negative racial/ethnic campus climate (Hurtado et al., 1999). Consequently, institutions that purport to specifically serve, support, and affirm ethnic groups, such as African Americans and Hispanics, often seek to more fully engage those students in educationally appropriate tasks and behaviors.

Several strands of research have documented how students benefit differentially depending on the type of institution they attend. For example, research has suggested that attending a historically Black college or university (HBCU) contributes significantly to student outcomes for African American students (Flowers, 2002; Outcalt & Skewes-Cox, 2002; Outcalt, 2002; Outcalt, Skewes-Cox, & Sharpe, 2002).
However, similar research for Hispanic students attending Hispanic-serving institutions (HSIs) is practically non-existent and much needed given the continuously growing population of Hispanic students and the increasing number of institutions that gain HSI designation annually as a result of this demographic trend.

Notwithstanding Hispanics being the fastest growing segment of the college-going population, inquiry into the Hispanic student experience has not maintained a proportional pace. Researchers have investigated the Hispanic student experience, but none of their studies have concentrated on the learning environments of institutions the federal government has specifically designated as serving this population (García, 2001; Hurtado & Carter, 1997; Hurtado, Carter, & Spuler, 1996; Rendon, 1994; Torres, 2003).

For this study, we use data from the 2003 administration of the National Survey of Student Engagement (NSSE) to explore differences in the educational experiences of Hispanic students at HSIs and PWIs while providing a contrasting picture of African American students at HBCUs and PWIs. More specifically, we are interested in understanding how students’ engagement in effective educational practices, their satisfaction with college, and their perception of their personal and intellectual development during college differ for Hispanics and African Americans across institutional contexts. This paper provides a unique contribution to the existing literature by comparing Hispanic student experiences at HSIs and PWIs and adds to the research comparing the experiences of African American students at HBCUs and PWIs. Further, by comparing the results for Hispanic and African American students, we raise important questions about the differences between the environments at HBCUs and HSIs and suggest important next steps in studying minority-serving institutions.

**LITERATURE REVIEW**

**Hispanic and African American Student Engagement**

The connection between student engagement—both inside and outside the classroom—and collegiate success is extensive and addresses a wide range of outcomes, such as cognitive development (Anaya, 1996; Kuh, 1995), moral and ethical development (Jones & Watt, 1999; Liddell & Davis, 1996), and persistence (Berger & Milem, 1999; Braxton, Milem, & Sullivan, 2000; Tinto, 1993). Much of this evidence appropriately accounts for students’ race or ethnicity, which leads to the conclusion that students from all racial/ethnic backgrounds benefit from engagement in practices such as interacting with faculty and active learning. However, inquiries also have suggested that minority students at PWIs encounter challenges and impediments, such as a “chilly” campus environment and strong familial obligations, to engaging in these practices at levels that produce meaningful learning and development (Allen, 1985; Feagin, Vera, & Imani, 1996; Hernandez, 2000; Pierce, 1989; Turner, 1994). Socioeconomic status (SES) for minority students, particularly the SES of their residential area and school, appears to have an especially powerful impact on their ability to succeed academically (Sirin, 2005). These impediments can lead to disengagement and diminished collegiate success measured in several ways. For example, Hispanic and African American students are less likely to pursue and complete a baccalaureate degree in comparison to White and Asian students (Benítez, 1998; Miller & García, 2004; O’Brien & Zudak, 1998).

Prior to matriculation into colleges and universities, both African Americans and Hispanics are subjected to economic, social, and racial disparities that paint a bleak picture,
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at least for many, in terms of their access to and engagement in higher education. Citing work by Orfield (1997), O’Brien and Zudak (1998) reported, “African Americans and Hispanics are increasingly isolated in inferior schools” and that “both groups are far more likely than whites to attend schools in areas of concentrated poverty” (p. 7), an assertion also supported by Garcia (2001). O’Brien and Zudak concluded that segregated neighborhoods usually equate to inferior resources, which eventually results in inferior levels of education for minority groups.

Hoffman, Llagas, and Snyder (2003) reported that African American students were most likely to attend public high schools with high concentrations of minorities from low socioeconomic communities, were less likely than White students to take advanced mathematics and science courses, and were less likely than Hispanic students to take advanced foreign language classes. The results also revealed that African American students who advance to postsecondary institutions are often not as prepared academically as their White counterparts, making collegiate success more difficult.

The fact that a large percentage of Hispanic students are first generation seems to have a more pronounced effect than it does for African Americans. Research has demonstrated that Hispanic students’ ability and willingness to consider college and persist to completion is not buttressed by familial and community influence. One study revealed that familismo (Dayton, Gonzalez-Vasquez, Martinez, & Plum, 2004)—traditional cultural barriers such as family as the primary concern—manifests itself in low expectations as well as pressure for children to remain closer to or at home. As a result, Hispanic students often find themselves struggling to manage culturally significant messages that might cause tensions between pursuing an education and maintaining familial obligations (Dayton et al.; Ortiz, 2004). Rendon (1994) found that “distrust of institutional infrastructures, fear of failure, fear about asking questions, fear of being perceived as ‘stupid’ or ‘lazy,’ cultural separation, doubts about being ‘college material,’ trauma associated with making the transition to college, and being intimidated by the system” (p. 9) further impede first-generation Hispanic students’ transition into higher education.

Once African American and Hispanic students enroll in college they face additional challenges and impediments that are exacerbated by their academic preparation and personal characteristics such as SES and being first generation. African American and Hispanic students, when compared to their White and Asian counterparts, are considerably less likely to graduate from a baccalaureate degree-granting institution within six years (Berkner, He, & Cataldi, 2002). Swail, with Redd and Perna (2003) identified critical issues to minority student retention in college such as academic preparedness in high school, campus climate, students’ commitment to their educational goals and the institution, social and academic integration, and the availability of adequate financial aid. These issues reflect impediments that have consistently emerged from prior investigations into this topic (Fleming, 1984; Hurtado, Milem, Clayton-Pedersen, & Allen, 1999; Hurtado & Ponjuan, 2005; Swail, Cabrera, & Williams, 2005; Terenzini, Yaeger, Bohr, Pascarella, & Nora, 1997; Turner, 1994).

A discussion of the evolution of HSIs and HBCUs follows, offering insight into the impact of their origins on their ability to impact students’ engagement in the institutional experience.

Student Success at HSIs and HBCUs

HBCUs and HSIs differ in significant ways, as illustrated by their varied institutional
legacies and cultures (Raines, 1998). HBCUs were created expressly for the purpose of educating African Americans and for years served as the only postsecondary option for the vast majority of this ethnic group. One of the positive legacies of this history is that the environments on these campuses seem particularly well-suited for promoting collegiate success among African American students. In contrast, almost all HSIs were founded first as majority-serving institutions and over time came to serve increasing numbers of Hispanic students in response to shifting demographics in America during the 20th century (Dayton et al., 2004; Laden, 2004). Under the influence of the Hispanic community and its educational leaders the federal government designated HSIs as accredited, degree-granting, public or private, non-profit colleges and universities with Hispanic student enrollment of 25% or more total undergraduate full-time equivalent (Laden, 2000). As a result of this evolution, HSI missions are not the byproduct of a long-term, sustained commitment to Hispanic students and culture.

There is evidence that Hispanic-centered faculty, administrators, and programs at HSIs can have positive effects on Hispanic students (e.g., Dayton et al., 2004). However, it is not clear from the research that these positive effects spread as widely across the Hispanic student body at HSIs as they do at HBCUs for African American students. According to Laden (2004), existing research “suggests that many HSIs offer a variety of academic and student support programs and holistic approaches that are specifically designed to raise Latino student aspirations and enhance their retention and completion rates” (p. 193). Dayton et al. and Laden (2001, 2004) proposed that faculty and administrators, particularly those who are Hispanic, can play a key role in facilitating academic and social integration as well as academic success. However, as Laden (2004) suggests, it is not clear how widespread these benefits are at HSIs.

Although there is great variety among HBCUs in mission and environment (see Brown & Freeman, 2002; Freeman, 1998), most HBCU environmental studies comparing them to PWIs have illuminated a gap in the experiences of African American students at the two different types of institutions. Overall, the existing research has suggested that African American students’ experiences at HBCUs are more educationally beneficial than for African Americans at PWIs. Davis (1991) surmised that opportunities to participate in student-centered activities at HBCUs that cater to African American students’ interests created social support networks that also facilitated student success. This is reflective of the African American and mission-centered curriculum, pedagogy, and activities in which students are involved on HBCU campuses, to which Outcalt and Skewes-Cox (2002) attributed higher levels of extracurricular and academic involvement. There is also some indication that the homogenous environment at HBCUs does not inhibit African American students’ engagement in ways that might be assumed. For example, Flowers and Pascarella (1999) found that the HBCU environment does not hinder African American students’ openness to racial and cultural diversity.

There is evidence that the negative effects of PWIs and the positive effects of HBCUs may not be consistent across all outcomes for African American students. Cabrera, Nora, Terenzini, Pascarella, and Hagedorn (1999) found that African American students’ cognitive outcomes are more shaped by prior academic ability than perceptions of discrimination and prejudice. Kim (2002) raised questions about whether the differences in certain outcomes (e.g., academic ability) found between African American students at HBCUs and PWIs are attributable more to student
differences than to institutional environments. However, the bulk of the evidence supports the idea that there is a significant institutional effect in attending an HBCU on many outcomes.

Although Hispanic students face challenges and hurdles at PWIs similar to those faced by African American students, there is not a parallel body of work examining whether Hispanic students differentially benefit from attending an HSI versus a PWI, even though there is evidence to suggest that HSIs, like HBCUs, reduce some barriers to engagement and facilitate success among their students. In fact, given the differences in how HBCUs and HSIs developed, there is room to speculate that the impact of attending an HSI for Hispanic students is probably less than that for African American HBCU students when both are compared to similar students at PWIs.

Given our understanding of HSIs and HBCUs and their potential benefits for those students they purport to serve, the current study was guided by the following questions. How do Hispanic student engagement, satisfaction, and self-reported gains from college differ at HSIs and PWIs? Given that the research on African American students at HBCUs is so consistently positive, will a comparison of the results for African American students at HBCUs and PWIs and Hispanic students at HSIs and PWIs reveal similar patterns? What do the patterns suggest about these students’ experiences at the different types of institutions?

METHODS

Data Source

Data from the NSSE were used for this study. Each year, NSSE collects data from hundreds of thousands of randomly selected first-year and senior undergraduates across the nation. The NSSE survey instrument is designed to explore the ways and manners by which undergraduate students engage in their campus communities and is grounded in the belief that the frequency with which students engage in particular educational activities provides a meaningful proxy for student learning and institutional quality. The survey measures the degree to which college students participate in an array of educationally effective activities such as asking questions and making contributions to class or by examining the frequency and type of interactions students have with faculty and peers. The breadth of items included in the survey provides a way to meaningfully explore differences in student engagement across various student groups and institution types.

Samples

The 2003 NSSE administration gathered responses from 147,166 undergraduate students in the nation. From this larger sample two separate sub-samples were selected for this study. The first consisted of African American seniors at PWIs and HBCUs; the second included Hispanic seniors at PWIs and HSIs. HSI institutions were identified by membership in the Hispanic Association of Colleges and Universities (www.hacu.net), and HBCU institutions were based on their official IPEDS (Integrated Postsecondary Education Data System) designation. Any institution not recognized as an HSI, HBCU, or tribal college (also an IPEDS designation) was considered a PWI.

The samples were purposefully restricted to seniors, who should have the most substantive experiences within the institutional environments under comparison. After these limits, and deletions for missing data, the study samples consisted of 2,896 African American seniors from 334 PWIs, 1,852 African American seniors from 20 HBCUs, 2,149 Hispanic seniors from 321 PWIs, and 2,028 Hispanic seniors from 26 HSIs.
Of the African American seniors at both types of institutions, approximately three fourths of the respondents were women, about 7% were athletes, and slightly less than 35% lived on campus. African American seniors at HBCUs were more likely than their PWI counterparts to be younger (average age of 26.6 years versus 29.1 years at PWIs), have mothers who at minimum attended some college, have become a member of a fraternity or sorority (18% versus 12% at PWIs), and be enrolled full time (86% versus 76% at PWIs). And, they were less likely to be transfer students (27% versus 47% at PWIs).

Most of the Hispanic seniors were enrolled full-time (77% at HSIs and 80% at PWIs) and

### Table 1.

| Scale and Component Items                              | Dependent Variables |
|--------------------------------------------------------|---------------------|
| **Higher-Order Thinking** (4 items; \( \alpha = 0.83 \), Hispanic; \( \alpha = 0.84 \), African American) | Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components; Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships; Making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions; Applying theories or concepts to practical problems or in new situations |
| **Active and Collaborative Learning** (7 items; \( \alpha = 0.65 \), Hispanic; \( \alpha = 0.69 \), African American) | Asked questions in class or contributed to class discussions; Made a class presentation; Worked with students on projects during class; Worked with classmates outside of class to prepare class assignments; Tutored or taught other students (paid or voluntary); Participated in a community-based project as part of a regular course; Discussed ideas from your readings or classes outside of class |
| **Student–Faculty Interaction** (5 items; \( \alpha = 0.77 \), Hispanic; \( \alpha = 0.77 \), African American) | Discussed grades or assignments with an instructor; Talked about career plans with a faculty member or advisor; Discussed ideas from your readings or classes with faculty members outside of class; Received prompt feedback from faculty on your academic performance; Worked with faculty members on activities other than coursework |
| **Supportive Campus Environment** (6 items; \( \alpha = 0.76 \), Hispanic; \( \alpha = 0.76 \), African American) | Emphasize: Provided the support needed to succeed academically; Emphasize: Helping cope with non-academic responsibilities (work, family, etc.); Emphasize: Providing the support you need to thrive socially; Quality: Your relationships with other students; Quality: Your relationships with faculty members; Quality: Your relationships with administrative personnel and offices |
| **Satisfaction with College** (2-items; \( \alpha = 0.77 \), Hispanic; \( \alpha = 0.74 \), African American) | Evaluate your entire educational experience at this institution; If you could start over again, would you go the same institution you are now attending |
| **Gains in Overall Development** (15-items; \( \alpha = 0.92 \), Hispanic; \( \alpha = 0.92 \), African American) | Acquiring a broad general education; Acquiring job or work-related knowledge and skills; Writing clearly and effectively; Speaking clearly and effectively; Thinking critically and analytically; Analyzing quantitative problems; Using computing and information technology; Working effectively with others; Voting in local, state, or national elections; Learning effectively on your own; Understanding yourself; Understanding people of other racial and ethnic backgrounds; Solving complex real-world problems; Developing a personal code of values and ethics; Contributing to the welfare of your community |

*Note.* All scales have a range from 1 to 4.
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few were athletes (2% at HSIs and 5% at PWIs) or members of fraternities or sororities (8% at HSIs and 11% at PWIs). Hispanic seniors at HSIs were more likely to be female (68% versus 64% at PWIs), older (average age of 28.2 years versus 26.5 at PWIs), and to have transferred from another institution (51% versus 44% at PWIs). They were, however, less likely to live on campus (10% versus 34% at PWIs) or have mothers who had attended college.

Measures
In this study, we focused on measures of students’ engagement in effective educational practices, a measure of their satisfaction with college, and a self-reported measure of how much students believed they gained from their college experience in terms of personal and intellectual development. Three of the five NSSE scales that capture students’ participation in effective educational practices (Kuh, 2001, 2003) were included in our focus: active and collaborative learning, student–faculty interaction, and supportive campus environment. The items included in each of these scales are listed in Table 1. Active and collaborative learning is a seven-item measure of the extent to which students are actively involved in their own learning process and engaged in activities that reflect their learning through real world problems. The five items within the student–faculty interaction scale measure the frequency and level of interaction students have with faculty at their institution in and outside of class. The six items that comprise the supportive campus environment scale measure the perceptions students have about the academic and non-academic support they receive and the quality of their relationships with others (students, faculty, and administrators) on campus.

Three additional measures were included in the study: higher-order thinking, satisfaction with college, and self-reported gains in overall development. Items included in these measures are also shown in Table 1. The higher-order thinking measure reflects the degree to which coursework at a student’s institution contributes to skills such as analysis of basic ideas, synthesis and organization of ideas into new interpretations and relationships, judgments regarding the value of information or arguments, and application of theories and concepts to practical problems. Satisfaction with college measures the degree to which students feel satisfied with their overall educational experience. Finally, the gains in overall development scale includes the extent to which students perceive that their educational experience contributed to their knowledge, skills, and personal development in areas such as acquiring a broad general education, writing skills, and developing a personal code of ethics.

In one set of our effect-size calculations (described below) we also controlled for several student and institutional characteristics that are known to influence student engagement. Individual characteristics such as gender and mother’s level of education were controlled for in the study, as were factors such as whether the student lived on or off campus and if they attended a public or private institution. A complete list of these control variables can be found in the appendix along with details on how each was measured.

Analysis
Within each sample and for each of the six measures in Table 1, two standardized mean differences (i.e., effect sizes with pooled standard deviations) were calculated for students at minority-serving institutions (MSIs; either HBCUs or HSIs, depending on the sample) compared to students at PWIs. The first mean difference was calculated without control variables to give a meaningful estimate of the difference between the groups. The second mean difference was calculated
using a regression model in which the dependent measure and all non-dichotomous independent measures were standardized. The measures in the appendix were entered into the model and included various student background characteristics (e.g., gender and age) and several collegiate experience variables (e.g., living on campus and fraternity/sorority membership) as well as a couple of institutional characteristics (e.g., undergraduate enrollment). In these models, the regression coefficient for the variable indicating whether a student attended an MSI (HBCU for the African American sample or HSI for the Hispanic sample) or a PWI was an estimate of the effect size after controlling for the other variables in the model.

Limitations

Although the institutions that participated in NSSE in 2003 mirrored all U.S. colleges and universities in terms of several institutional characteristics such as Carnegie classification and control (National Survey of Student Engagement, 2003), generalizations from NSSE are limited because some institutions choose to participate whereas others do not. In this particular study, this means that our results and conclusions most appropriately apply to those institutions in the study. Generalizations beyond the 20 HBCUs, 26 HSIs, and hundreds of PWIs in the study should be made and read with caution.

In addition, the comparisons made between students at the different types of institutions were made without controlling for pre-college measures of students’ levels of engagement, their predisposition to be satisfied with college, or precursors to the gains items. Consequently, it is possible that differences found between groups of students could be attributable to differences in institutional contexts or differences in the groups of students that existed prior to college. In other

| Scale                        | PWI  | SD  | HBCU | SD  | Mean Diff | Effect Size<sup>a</sup> | Effect Size with Controls<sup>b</sup> |
|------------------------------|------|-----|------|-----|-----------|--------------------------|---------------------------------------|
| Higher-Order Thinking        | 3.13 | 0.69| 3.21 | 0.68| 0.08      | 0.11***                  | 0.06                                  |
| Active & Collab Learning     | 2.53 | 0.50| 2.74 | 0.53| 0.22      | 0.42***                  | 0.33***                               |
| Student–faculty Interaction  | 2.37 | 0.64| 2.64 | 0.66| 0.28      | 0.42***                  | 0.30***                               |
| Supportive Campus Env        | 2.73 | 0.57| 2.82 | 0.59| 0.09      | 0.16***                  | 0.10**                                |
| Satisfaction with College    | 3.07 | 0.73| 3.09 | 0.75| 0.02      | 0.03                     | 0.04                                  |
| Gains in Overall Development | 2.91 | 0.62| 3.10 | 0.63| 0.19      | 0.29***                  | 0.23***                               |

<sup>a</sup> The effect size is the mean difference divided by the pooled standard deviation.

<sup>b</sup> Effect size with controls is the unstandardized regression coefficient for the institutional type variable (PWI versus HBCU) from analyses where all non-dichotomous variables were standardized. Controls include student characteristics (background and college experiences), undergraduate enrollment, and institutional control.

*p < 0.05.  **p < 0.01.  ***p < 0.001.
words, this study documents differences between seniors at different types of institutions without pinpointing the cause of those differences.

RESULTS

Tables 2 and 3 present the results of the mean comparisons for African American and Hispanic seniors, respectively. The results suggest that the average African American senior at an HBCU reported significantly higher levels of engagement and gains in overall development than did the average African American senior at a PWI. In particular, African American seniors at HBCUs were much more likely than their counterparts at PWIs to report higher levels of active and collaborative learning, student–faculty interaction, and gains in overall development. Even after controlling for several student characteristics (e.g., gender, age, fraternity or sorority membership) and a couple of institutional characteristics (public/private status and size), the effect sizes for these measures remained relatively high (above 0.30 for the two engagement measures and above 0.20 for the gains measure), suggesting a meaningful difference between the two groups.

For active and collaborative learning, the average African American senior at an HBCU scored about 2.74 compared to a mean score of 2.53 for African American seniors at PWIs (on the original scale for the component items, 2 = sometimes and 3 = often). The mean difference of 0.22 represents about two fifths of a standard deviation (0.42) without accounting for differences between the groups and one third of a standard deviation (0.33) after controls were introduced ($p < 0.001$ for each comparison). This suggests that African American seniors at HBCUs were more likely than their PWI counterparts to report that they often participated in activities such as asking questions in class, contributing to class

| Scale                      | PWI     | SD   | HSI     | SD   | Mean Diff | Effect Size$^a$ | Effect Size with Controls$^b$ |
|----------------------------|---------|------|---------|------|-----------|----------------|-----------------------------|
| Higher-order thinking      | 3.15    | 0.67 | 3.16    | 0.69 | 0.00      | 0.00           | 0.05                        |
| Active & Collab Learning   | 2.51    | 0.49 | 2.55    | 0.52 | 0.04      | 0.07$^*$       | 0.11$^{**}$                 |
| Student–faculty Interaction| 2.38    | 0.65 | 2.30    | 0.65 | -0.08     | -0.12$^{***}$  | -0.01                      |
| Supportive Campus Env      | 2.77    | 0.57 | 2.77    | 0.57 | 0.00      | 0.01           | 0.08$^*$                    |
| Satisfaction with College  | 3.21    | 0.70 | 3.17    | 0.69 | -0.04     | -0.06          | 0.00                        |
| Gains in Overall Development| 2.93    | 0.61 | 2.99    | 0.62 | 0.05      | 0.09$^{**}$    | 0.13$^{***}$                |

$^a$ The effect size is the mean difference divided by the pooled standard deviation.

$^b$ Effect size with controls is the unstandardized regression coefficient for the institutional type variable (PWI versus HSI) from analyses where all non-dichotomous variables were standardized. Controls include student characteristics (background and college experiences), undergraduate enrollment, and institutional control.

$p < 0.05$. $^{**}p < 0.01$. $^{***}p < 0.001$. 
discussions, making presentations in class, working with classmates inside and outside of class, and community-based projects as a part of class.

The scores for student–faculty interaction were slightly lower, but the differences were very similar in size. The average senior at an HBCU scored about 2.64, whereas the mean for African American seniors at PWIs was 2.37 (on the original scale for the component items, 2 = sometimes and 3 = often). The mean difference of 0.28 represents about two fifths of a standard deviation (0.42) without controls and about one third of a standard deviation (0.30) after the introduction of controls (p < 0.001 for each comparison). This suggests that, compared to African American seniors at PWIs, African American seniors at HBCUs were more frequently discussing grades, readings, and career plans with faculty; receiving prompt feedback from faculty; and working with faculty outside of class.

The third largest difference shown in Table 2 is for students’ self-reported gains in overall development. The average African American senior at an HBCU scored 3.10, whereas the average African American senior at a PWI scored 2.91 (on the original scale for the component items, 2 = some and 3 = quite a bit). The difference in mean scores for this measure turned out to be almost three tenths of a standard deviation (0.29) without controls and almost a quarter of a standard deviation (0.25) when controls were in the analysis (p < 0.001 for each comparison). Although this difference is not quite as large as that for active and collaborative learning, it is still an appreciable difference that suggests that, compared to their counterparts at PWIs, African American seniors at HBCUs reported gaining more in terms of outcomes such as acquiring a broad general education, thinking critically and analytically, understanding oneself and people of other racial and ethnic backgrounds, developing a personal code of values and ethics, and contributing to the welfare of one’s community.

Relatively small but significant differences existed between African American seniors at HBCUs and PWIs in terms of how much their courses emphasized higher-order thinking and how supportive they viewed their collegiate environment, with seniors at HBCUs reporting higher scores on these measures. As with most other measures in the analyses, the effect sizes dropped when control variables were introduced and, in the case of higher-order thinking, the difference was no longer significant (p > 0.05). This suggests that African American seniors felt that their campus environments were slightly more supportive; student relationships with other students, faculty, and administrators were of slightly better quality; and the campus provided slightly more of the support needed by students to succeed academically and socially. It also suggests that students from both types of institutions felt their courses emphasized more complex forms of thinking such as analyzing ideas and theories and synthesizing ideas and information at about the same levels.

The means for satisfaction with college (3.09 for African American seniors at HBCUs and 3.07 for African American seniors at PWIs) suggest that African American seniors at HBCUs and PWIs were nearly equally satisfied with their college experiences. The mean difference on this measure (0.02) was not statistically significant (p > 0.05 for both comparisons). Although this result seems to contradict some prior work on differences between HBCUs and PWIs (e.g., Allen, 1986), it is consistent with other analyses on NSSE data that have found few differences in levels of satisfaction across types of students as well as types of institutions.

In contrast to the results for African
Americans, the average Hispanic senior at an HSI looked quite similar to the average Hispanic senior at a PWI in terms of engagement, satisfaction with college, and gains in overall development. The largest differences between the two groups of Hispanic students were on active and collaborative learning, student–faculty interaction, and gains in overall development. However, the effect sizes were generally small (around 0.10) and did not always favor students at HSIs.

For active and collaborative learning, the average Hispanic senior at an HSI scored about 2.55 compared to a mean score of 2.51 for Hispanic seniors at PWIs (on the original scale for the component items, 2 = sometimes and 3 = often). The mean difference of 0.04 represents not quite a tenth of a standard deviation (0.07, \( p < 0.05 \)) without accounting for differences between the groups and slightly more than a tenth of a standard deviation (0.11, \( p < 0.01 \)) after controls were introduced. This suggests that Hispanic seniors at HSIs were slightly more likely than their PWI counterparts to report that they often participated in activities such as asking questions in class, contributing to class discussions, making presentations in class, working with classmates inside and outside of class, and community-based projects as a part of class.

The scores for student–faculty interaction also showed a small difference, but in the opposite direction. The average senior at an HSI scored about 2.30, whereas the mean for Hispanic seniors at PWIs was 2.38 (on the original scale for the component items, 2 = sometimes and 3 = often). The mean difference of -0.08 indicates that Hispanic seniors at HSIs scored about one tenth of a standard deviation (-0.12, \( p < 0.001 \)) below their counterparts at PWIs. However, this difference became very close to zero (-0.01, \( p > 0.05 \)) after the introduction of controls. This suggests that, compared to Hispanic seniors at HSIs, Hispanic seniors at PWIs were slightly more frequently discussing grades, readings, and career plans with faculty; receiving prompt feedback from faculty; and working with faculty outside of class. However, because the difference was not detectably different than zero with the introduction of controls, the difference is attributable primarily to differences in the characteristics of the students in the two groups of seniors.

The results in Table 3 also show a difference between the two groups of Hispanic students on their self-reported gains in overall development. The average Hispanic senior at an HSI scored 2.99, whereas the average Hispanic senior at a PWI scored 2.93 (on the original scale for the component items, 2 = some and 3 = quite a bit). The difference in mean scores for this measure (0.05) turned out to be about one tenth of a standard deviation (0.09, \( p < 0.01 \)) without controls and 0.13 (\( p < 0.001 \)) when controls were in the analysis. This suggests that, compared to their counterparts at PWIs, Hispanic seniors at HSIs reported slightly greater gains in terms of outcomes such as acquiring a broad general education, thinking critically and analytically, understanding oneself and people of other racial and ethnic backgrounds, developing a personal code of values and ethics, and contributing to the welfare of one’s community.

For supportive campus environment the average scores for the two groups of Hispanic students were very nearly identical (\( p < 0.005 \)). However, given the differences in the characteristics of the two groups, Hispanic seniors at HSIs scored slightly higher than Hispanic seniors at PWIs once controls were introduced (0.08, \( p < 0.05 \)). This suggests that, controlling for differences between the groups, Hispanic seniors at HSIs viewed their environment slightly more favorably than their counterparts at PWIs. The differences between the two groups of Hispanic seniors were very small and
not statistically significant for higher-order thinking and satisfaction with college.

As described above, there is an obvious difference in the pattern of results in Tables 2 and 3. Two other less obvious points are worth noting when looking at the tables together. First, although we were primarily interested in differences across groups within each racial/ethnic category, the lack of differences between Hispanic seniors at HSIs and PWIs led us to wonder whether Hispanic students, in general, scored higher or lower than other students. A quick comparison of the first column of means in Tables 2 and 3 reveals that Hispanic and African American seniors at PWIs had nearly identical scores on each of the six scales. Combined with the other results, this suggests that African American seniors at HBCUs stood out among the students in this study as being more engaged and reporting greater gains from their collegiate experience.

Second, for the African American comparisons, the effect sizes all decreased with the introduction of controls, whereas the opposite was true for the Hispanic comparisons. Among African American seniors, those attending HBCUs were more likely to have characteristics (e.g., full-time enrollment status) that are predictive of higher levels of engagement. Consequently, some of the difference between seniors at HBCUs and PWIs were attributable to these differences in characteristics, and one saw a resulting decrease in the effect size when these characteristics were controlled for. For Hispanic seniors, the story was the opposite. Hispanic seniors attending HSIs were more likely, in general, to have characteristics (e.g., transfer status) that are predictive of lower levels of engagement. So, once these differences were controlled for, one saw a resulting increase in the effect size.

DISCUSSION AND IMPLICATIONS

Central to this study, are questions about how well minority-serving institutions (MSIs) and PWIs serve African American and Hispanic students. Ideally, African American and Hispanic students would all engage in their collegiate experience at comparably high levels across institutional groupings. However, the results of this study suggest that ideal conditions do not exist even at some campuses that claim ethnic and cultural orientations, which has important implications for African American and Hispanic students as well as the institutions they attend.

As with previous studies (e.g., Allen, 1992), our results provide evidence that African American students at HBCUs are more engaged and have a sense that they gain more from college than their counterparts at PWIs. The relatively large differences for active and collaborative learning and student–faculty interaction suggest that the students and faculty at HBCUs in this study are working together to a greater degree than African American seniors and their faculty members at PWIs to get students involved in the practices and relationships that lead to desirable educational outcomes. The slightly smaller, yet meaningful difference for gains in overall development suggest that African American seniors at HBCUs sense that they are learning and developing as a result of their collegiate experience to a greater degree than African American seniors at PWIs.

Interestingly, particularly given that scholars have posited that a primary reason for the relative success of HBCUs is their environments (Allen, Epps, & Haniff, 1991; Harvey & Williams, 1996), the differences between African American seniors at HBCUs and PWIs were relatively small for the supportive campus environment measure. One possible explanation of this finding is that the notion of supportive environment captured by the measure in this study (social and academic support) does not entirely encapsulate what
scholars mean when they talk about the supportive environments at HBCUs. The racial/ethnic climate on campus is an obvious example of an important part of an institutional environment not captured by the supportive campus environment measure used in this study.

On three measures, active and collaborative learning, supportive campus environment, and gains in overall development, the Hispanic seniors at HSIs scored a little higher than Hispanic seniors at PWIs after controlling for student and institutional characteristics. Although statistically significant, these differences were small. On the other three measures, higher-order thinking, student–faculty interaction, and satisfaction with college, the differences were not distinguishable from zero. In contrast to the findings for African American seniors at HBCUs, these results show that Hispanic seniors at HSIs score similarly to Hispanic seniors at PWIs on all of the measures in the study.

To explain the difference in the patterns of the effects for Hispanic and African American students one needs to consider the differences in the cultures found at HSIs, HBCUs, and PWIs as well as potential differences between the students. Based on our results and past research (e.g., Allen, 1992), the average African American student at an HBCU engages more frequently in effective educational practices and reports gaining more from college than the average African American student at a PWI. Such results have been attributed to distinct differences between the institutional cultures at the different types of institutions (Allen et al., 1991). As a result of HBCU cultures being aimed at student involvement and success, African American students have more opportunities to engage in effective educational practices and encounter fewer impediments to engagement at HBCUs compared to PWIs (Bridges, Kinzie, Nelson Laird, & Kuh, in press; Feagin et al., 1996; Turner 1994). This leads to the conclusion that, in general, an HBCU will better serve the educational needs of the average African American student, something students should consider in their college choice process.

When choosing and attending PWIs, African American students, with assistance from friends, family, faculty, and administrators, should be savvy, as many are, in finding sub-cultures at their institutions that support and nurture their engagement and development in ways similar to what is found at many HBCUs. For their part, PWIs and the people that work there should continue to explore, create, and assess programs and processes that provide for the educational needs of African American students. The gap in engagement and outcomes between African American students at PWIs and HBCUs is one PWIs should be actively attempting to close.

Employing a similar rationale for HSIs, our results would suggest that, on average, HSIs and PWIs are about equal in serving (or not serving) the educational needs of Hispanic students. And, Hispanic seniors at both types of institutions are roughly as engaged in educationally purposeful activities as African American seniors at PWIs. Why aren’t Hispanic seniors at HSIs scoring similarly to African American seniors at HBCUs? HSIs have a relatively short history of serving large numbers of Hispanic students and many have much longer histories of serving White students. Consequently, we suggest that HSIs are in the midst of a shift from having White-oriented institutional cultures to cultures inclusive of Hispanic students and their educational needs. In fact, for many HSIs, the shift may only be starting. For such an institution, its culture may in essence be that of a PWI—nearly all were founded as PWIs after all. For some institutions, the designation of HSI is currently only a marker of student demographics, not
of their institutional cultures being relevant and responsive to Hispanic students.

Whereas HSIIs are in the process of shifting their cultures, HBCUs have been on the course of providing culturally relevant and responsive education to African American students for their entire histories. Given this, it makes sense that students at HBCUs would be engaging and gaining at a different level than African Americans at PWIs and Hispanics at either HSIIs or PWIs.

At this point in the development of U.S. colleges and universities, Hispanic students should, with the appropriate assistance, be savvy in choosing and attending HSIIs or PWIs. It is probably not a safe assumption that just because an institution is an HSI that it will have an overall culture that is supportive and attuned to their educational needs in ways that many HBCUs are for African American students. Like their African American counterparts at PWIs, Hispanic students likely need to find sub-cultures responsive to their needs regardless of the type of institution they attend (Hurtado & Carter, 1997). That said, the chances of finding such a sub-culture may be greater at an HSI given the larger number of Hispanic students. However, if that is the case, the lack of differences for Hispanic students in our results would suggest that some segment of Hispanic seniors may not be plugged into these sub-cultures in ways that meet their educational needs.

The differing patterns of results for Hispanic and African American seniors suggest that there is an ongoing need to improve the cultures found at many institutions of higher education in terms of promoting the educational success of African American and Hispanic students. To meet this challenge, more needs to be known about how institutions shift from being an impediment to being a vehicle for student engagement and success. One place to start is by examining the characteristics of institutions that have done well, on average, with all of their students (e.g., see Kuh, Kinzie, Schuh, Whitt, & Associates, 2005). However, much more needs to be known about the process of improvement at institutions that have not done as well. For example, identifying and studying HSIIs that have become relatively successful at serving the educational needs of Hispanic students could prove particularly useful for other HSIIs and PWIs trying to improve the educational success of diverse groups of students. A next step in this area is to examine the predictors of engagement and outcomes within HSIIs, something that could be done with further exploration of data collected by NSSE.

In addition to considering differences in the institutional cultures at HSIIs, HBCUs, and PWIs, one can question whether the different patterns of results are attributable to meaningful differences between the students that choose to attend the three different types of institutions. For example, the African American students in this study who attended HBCUs tended to be younger and have mothers with higher levels of education, were more likely to be enrolled full time, and were less likely to be transfer students than their PWI counterparts. This suggests that students who attend HBCUs are at a relative advantage compared to their peers at PWIs. Although these differences in the types of students attending HBCUs and PWIs were controlled for in our final estimates of the effect sizes, it is possible that there were several student characteristics not measured on the NSSE survey that, if controlled for, would decrease our estimates of the effect sizes. Given prior research on differences between students at HBCUs and PWIs, we suspect that although the differences could decrease, it is unlikely that they would have become sufficiently close to zero to be insignificant.

The story was the opposite for Hispanic
students attending HSIs. Compared to their counterparts at PWIs, the Hispanic seniors in this study tended to be older, to have mothers with lower levels of education, to have transferred from another institution, and to live off-campus. Given that this indicates that Hispanic students at HSIs are at a relative disadvantage in terms of engagement and gaining from their experience, then the small positive differences among seniors at HSIs and PWIs may actually indicate some reversal of the initial disadvantage.

In our sample, the average Hispanic senior at an HSI was 28.2 years in age (two years greater than at PWIs), had a mother with a high school degree or less (at a PWI the average Hispanic senior’s mother has had some college), had a one in ten chance of living on campus (compared to one in three at PWIs), and had a one in two chance of being a transfer student (compared to slightly more than two in five at PWIs). These characteristics illustrate that all institutions, but particularly HSIs, have to take seriously the removal of barriers to engagement, such as cultures geared toward traditionally aged students, familial and outside pressures to disengage from campus, status as a first-generation student, and “transfer shock” (Alpern, 2000; Baum & Payea, 2004; Dayton et al., 2004; Garcia, 2001). As a result, Hispanic students may experience more difficulty in navigating the daily responsibilities of collegiate life and therefore often require more encouragement to participate in effective educational activities.

Sorting out the differences between students and the differences between educational environments is a priority as research continues to examine students at HSIs, HBCUs, and PWIs. It is clear from this study that future work in this area should try to account more fully for the differences that may exist between students at PWIs and MSIs. Additionally, work is needed to further expand understanding of the experience of Hispanic students on HSI campuses. The substantial resources being directed toward these institutions by the federal government requires research that provides an understanding of their effectiveness for Hispanic students and an enhanced understanding of their cultures for the benefit of future students, their families, faculty, and other stakeholders.

CONCLUSION

With regard to African American students at HBCUs, this study is consistent with a large body of work that suggests that students at those institutions engage to a greater degree in effective educational practices and consequently gain more from their collegiate experience when compared to their counterparts at PWIs. With regard to Hispanic students, this was largely an exploratory study aimed at determining whether differences in engagement, student satisfaction, and students’ perceptions of their gains from college between seniors at HSIs and PWIs mirrored those found for African American students. That the patterns did not match was not entirely a surprise given the different histories and mission-driven orientations of HBCUs and HSIs. Rather than suggesting that our results imply that there is a problem with HSIs, we suggest that the results of this study are an indication of the varied cultures that exist across the institutional groupings and that there is a need to ask more refined and deeper questions, which will help expand our understanding of how all institutions can better serve the educational needs of Hispanic and African American students.

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APPENDIX.
Control Variables

| Name                              | Description                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------|
| Gender                            | 0 = Male; 1 = Female                                                        |
| Age                               | Continuous                                                                  |
| Mother’s Education Level          | 1 = Did not finish high school, 2 = graduated from high school, 3 = attended college but did not complete, 4 = completed an Associate’s degree, 5 = completed a Bachelor’s degree, 6 = completed a Master’s degree, 7 = completed a Doctoral degree |
| Fraternity or Sorority Membership | 0 = Non-member; 1 = Member of a social fraternity or sorority                |
| Student Athlete                   | 0 = Non-athlete; 1 = Student athlete on a team sponsored by the institutiona’s athletic department |
| Live on Campus                    | 0 = Live off campus; 1 = Live in a dormitory or other campus housing (not fraternity or sorority house) |
| Enrollment Status                 | 0 = Part time; 1 = Full time                                                |
| Transfer Status                   | 0 = Did not transfer; 1 = Transferred                                       |
| Majora                            | Arts and Humanities, Biological Sciences, Business, Education, Engineering, Physical Science, Professional, Social Science, Other, Undecided |
| Undergraduate Enrollment          | Total number of baccalaureate degree seeking students                       |
| Institutional Control             | 0 = Public; 1 = Private                                                     |

a Coded dichotomously (0 = not in group, 1 = in group) by racial/ethnic group for regression analyses.
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