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The impact of culture on Filipino American students' sense of belonging

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Asian Americans and Pacific Americans[1] are largely invisible in postsecondary education research and discourse. While a handful of researchers have examined the experiences of Asian American college students (e.g., Buenavista, Jayakumar, & Misa-Escalante, 2009; Cress & Ikeda, 2003; Inkelas, 2004; Kotori & Malaney, 2003; Lee & Davis, 2000; Lewis, Chesler, & Forman, 2000; Maramba, 2008a, 2008b; Museus, 2007, 2008a, 2008b; Museus & Truong, 2009; Suyemoto, Kim, Tanabe, Tawa, & Day, 2009), such inquiries remain

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[1]The term "Asian Americans" includes individuals of Bangladeshi, Cambodian, Chinese, Filipino, Hmong, Indian, Indonesian, Japanese, Korean, Lao, Malaysian, Pakistani, Sri Lankan, Taiwanese, Thai, and Vietnamese descent, whereas the term "Pacific Islanders" encompasses Native Hawaiian, Guamanian/Chamorro, Samoan, Tongan, Fijian, and other groups from the Pacific Islands.

sparse. In fact, a recent review of literature revealed that only approximately 1% of the articles published in five of the most widely read peer-reviewed journals in the field of higher education—the *Journal of College Student Development, NASPA Journal, Journal of Higher Education, Research in Higher Education,* and *The Review of Higher Education*—included a focus on Asian Americans (Museus, 2009). Because of this marginalization and invisibility, Asian Americans are arguably one of the most misunderstood populations in postsecondary education (Chang, 2009). In this study, we aim to increase current levels of understanding regarding the experiences of Asian American college students. Specifically, we analyze how cultural factors shape the sense of belonging of Asian American students—and, more specifically, Filipino American students—in college.

In the following sections, we provide the context for this inquiry. First, we discuss the invisibility of Asian Americans and the importance of developing a better understanding of this population. We also discuss researchers' calls for empirical examinations of various ethnic subgroups within the larger pan-ethnic Asian American undergraduate population to advance knowledge regarding their experiences. Then, we provide an overview of literature related to the role of culture in the experiences of college students. Finally, we review the limited literature on the impact of culture on the experiences and outcomes of Asian American undergraduates. The remainder of the article is focused on our structural equation modeling (SEM) analysis of the effects of cultural factors on the experiences of Filipino American college students.

THE INVISIBILITY OF ASIAN AMERICANS

There are many reasons why the continued marginalization and invisibility of Asian Americans in higher education are problematic. Here we stress two. First, the Asian American population is rapidly growing. In 1999, more than 10 million Asian Americans were living in the United States (U.S. Census, 2000). Moreover, Asian Americans are the second fastest growing racial group in the nation and are projected to comprise approximately one of every ten citizens by 2050. Thus, it is prudent for higher education to respond to this major demographic shift that will be shaping both the composition of their campuses and their surrounding communities in the years to come (Museus, 2009; Teranishi, Ceja, antonio, Allen, & McDonough, 2004).

A second reason that the continued marginalization and invisibility of Asian Americans are problematic is that the model minority myth—the commonly held notion that Asian Americans are a monolithic group that achieves universal academic and occupational success—is false and masks the needs of this population (Museus, 2009; Museus & Kiang, 2009; Suzuki, 1989, 2002). Specifically, such racial stereotypes and their corresponding inaccurate assumptions are perpetuated by oversimplified and misleading

data analyses (Museus, 2009). Indeed, analyses of aggregated data confirm this stereotype because they indicate that Asian Americans attain degrees at higher rates than other racial populations (e.g., Berkner, He, & Cataldi, 2002). However, disaggregated census data show that this population is not as homogenous and successful as it is so often portrayed (Chang, Park, Lin, Poon, & Nakanishi, 2007; College Board, 2008; Hune, 2002; Museus, 2009; Teranishi et al., 2004). In fact, some ethnic (e.g., Cambodian, Hmong, Lao) populations within the broader Asian American category hold baccalaureate degrees at rates far lower than the national average and even lower than their Black, Latino, and White peers (Museus, 2009). For example, Asian Indian (64%), Pakistani (54%), and Chinese (48%) Americans hold bachelor's degrees at more than twice the rate of the overall national population (24%), while their Hmong (8%), Laotian (8%), Cambodian (9%), and Vietnamese (20%) counterparts hold those four-year degrees at rates far lower than the national average (U. S. Census Bureau, 2004).

Moreover, the racial stereotypes of Asian Americans and their corresponding and misleading assumptions mask other important challenges that many Asian American students face, such as substantial pressure from cultural conflict, unwelcoming racial climates, pressure to conform to racial stereotypes, racial discrimination, and relatively high rates of mental health issues (Cress & Ikeda, 2003; Greenburger & Chen, 1996; Harper & Hurtado, 2007; Lagdameo, Lee, Nguyen, Liang, Lee, Kodama, & McEwen, 2002; Lewis, Chesler, & Forman, 2000; Museus, 2008b; Museus & Truong, 2009). Thus, treatment of the Asian American student population as a monolithic and universally successful racial group contributes to their invisibility in higher education research and practice, while simultaneously devaluing their realities and needs (Hune, 2002, Museus, 2009). As we discuss in the following section, this investigation constitutes one small step in developing a more complex understanding of Asian American students by advancing knowledge regarding the experiences of specific ethnic groups within that larger panethnic Asian American population.

EXAMINING ASIAN AMERICAN ETHNIC SUBPOPULATIONS

Despite the fact that Asian American ethnic subgroups tend to be lumped into one homogenous racial category, the vast diversity of cultural backgrounds, experiences, and outcomes among the different subpopulations within the Asian American classification warrant the examination of the realities of those groups within the larger racial category (Maramba, 2008b; Museus, 2009; Teranishi et al., 2004). The term "Asian American" emerged during social reform efforts of the 1960s to unify diverse advocacy groups to fight racial discrimination (Wei, 1993), but the U.S. Census Bureau adopted the "Asian and Pacific Islander" category in the 1970s (Hune, 2002). Now,

"Asian Pacific Americans" or "Asian and Pacific Islanders" include more than 50 different ethnic subpopulations that vary significantly in such characteristics as national origins, educational attainment, immigration patterns, language, and socioeconomic status (Hune, 2002; Lee, 2006).

Given the vast diversity within the larger Asian American category, expanding current levels of knowledge about this group requires developing better comprehension of the experiences of college students within specific ethnic subpopulations. Indeed, scholars in Asian American studies have been discussing the importance of analyzing disaggregated and ethnic-specific data on Asian Americans for decades to understand their unique realities (Kiang, 2002; Maramba, 2008b; Museus, 2009; Suzuki, 1989, 2002; Teranishi et al., 2004). This call is important because the disparities in degree attainment suggest that Asian American students from different ethnic groups do have varying experiences and exhibit disparate outcomes (Hune, 2002; Museus, 2009; Museus & Kiang, 2009). Yet with few exceptions (e.g., Chhuon & Hudley, 2008; Kiang, 2002; Maramba, 2008a, 2008b), empirical investigations that contribute to developing an understanding of the experiences of Filipino American and other ethnic subgroups within the field of higher education are difficult to find.

Empirical evidence that highlights ethnic disparities in education warrants the examination of the experiences and outcomes of Filipino American students. Both state-level and national data suggest that Filipino Americans suffer from disparities in educational progress. Those data indicate that Filipino Americans are represented at four-year institutions at lower rates than other racial groups and other Asian American ethnic subgroups in states with the largest numbers of Filipino Americans, such as California and Hawai'i (Okamura, 1998, 2008). Moreover, researchers examining national data have shown that Filipino Americans tend to be underrepresented at more selective colleges and universities and are more concentrated at low-selectivity institutions, compared to other Asian American ethnic subgroups. Teranishi et al. (2004), for instance, examined more than 66,000 Asian American undergraduates and found that less than 19% of Filipino Americans attended highly selective institutions, compared to 38% of Korean and 35% of Chinese Americans. Such disparities warrant a better understanding of the experiences of this population. Accordingly, one intended outcome of the current study is to develop a more intricate understanding of the impact of cultural factors on Filipino American students' experiences and outcomes.

FROM CULTURAL SUICIDE TO CULTURAL INTEGRITY

Tinto's (1987, 1993) theory of student integration—the most widely cited theory of college student departure—is founded on a set of cultural tenets. Building on literature in the fields of anthropology and sociology (Durkheim, 1951; Van Gennep, 1960), Tinto (1987, 1993) postulated that students must

dissociate from their precollege cultures and adopt the values and norms of their dominant campus cultures to achieve integration into the academic and social subsystems of their college campus, thereby maximizing their likelihood of success. Subsequently, however, higher education researchers have critiqued the cultural bias inherent in the underlying cultural assumptions of Tinto's integration theory and have found that it is not fully adequate in explaining persistence or departure among students of color (Attinasi, 1989; Tierney, 1992, 1999). Tierney (1992, 1999), for example, asserted that expecting racial/ethnic minority students to sever ties with their precollege cultures and assimilate into their dominant campus cultures is a form of "cultural suicide" that places a disproportionate share of the burden of college adjustment on students of color and ignores the responsibility of institutions to foster minority students' success.

As an alternative to the assumption that students must dissociate from their precollege cultures to succeed in higher education, Tierney (1999) and Tierney and Jun (1999) offer the concept of cultural integrity, which they explain refers to the existence of culturally relevant institutional programs and practices that engage students' cultural backgrounds. They assert that cultural integrity can help affirm racial/ethnic minority students' cultural identities and increase the chances that those students will succeed in higher education. The concepts of cultural suicide and cultural integrity may be useful in predicting Filipino and other Asian American college students' adjustment to, sense of belonging in, and persistence through college, but these relationships have yet to be explored.

FROM CULTURAL INTEGRATION TO SENSE OF BELONGING

In his later work, Tinto (1993) acknowledged that cultural integration may not be an ideal concept for understanding the process by which students become a part of their campus communities and argued that "the concept of 'membership' is more useful than 'integration' because it implies a greater diversity of [modes of] participation" (p. 106). Higher education scholars have noted, however, that traditional measures of integration or membership often reflect forms of participation that are normal among the dominant majority and exclude activities that are more common among nontraditional students (e.g., religious, community service, activism, and ethnic arts) (Fox, 1986; Hurtado, 1994; Hurtado & Carter, 1997; Nora, 1987). Accordingly, Hurtado and Carter (1997) emphasized the importance of examining measures of individuals' perceptions of whether they are a part of the campus community, rather than their actual behaviors or participation in researcher-specified campus activities. Those authors used sociological researchers' concept of individuals' perceived sense of cohesion (Bollen & Hoyle, 1990) to construct a measure of students' "sense of belonging." Hur-

tado and Carter (1997) examined the relationship between Latino college students' perceptions of the campus climate and their sense of belonging, and the authors found that those students' perceptions of hostile climates negatively influenced their sense of belonging in college.

Other researchers have subsequently employed "sense of belonging" to examine the experiences of White and racial/ethnic minority college students (Hausmann, Schofield, & Woods, 2007; Hoffman, Richmond, Morrow, & Salomone, 2002; Lee & Davis, 2000; Locks, Hurtado, Bowman, & Osguera, 2008). Hausmann et al. (2007), for example, examined a single-institution sample of Black and White students and demonstrated that sense of belonging was a positive predictor of intent to persist. This finding was important because data also indicate that Asian American, Black, and Latino students report lower levels of "sense of belonging" compared to their White peers (Johnson et al., 2007). Moreover, recent studies confirm Hurtado and Carter's (1997) finding that campus environments play a significant role in shaping students' sense of belonging (Johnson et al., 2007; Locks et al., 2008). Thus, taken together, this research suggests that lower levels of sense of belonging among students of color could be one contributor to their relatively lower rates of persistence and degree completion compared to White undergraduates. It also indicates that institutions might have the ability to positively or negatively influence racial/ethnic minority students' persistence through the campus environments that they create. However, empirical examinations of the role of cultural factors in shaping students' sense of belonging and inquiries into the role that "sense of belonging" plays in the experiences of specific Asian American ethnic subpopulations, such as Filipino American undergraduates, are virtually nonexistent.

FROM A CULTURAL TO INTERCULTURAL PERSPECTIVE OF SUCCESS

Building on previous work (Hurtado & Carter, 1997; Tierney, 1992, 1999; Tinto, 1987, 1993), Kuh and Love (2000) offered an alternative cultural perspective of student success. They posited that the distance between students' cultures of origin (i.e., precollege cultures) and cultures of immersion (i.e., campus cultures) is inversely related to their likelihood of success. Inherent in this proposition is the notion that students who come from cultures that are most different than the dominant cultures that are found on their respective college campuses will encounter the greatest challenges as they adjust to higher education. The authors also postulated that students from cultures that are substantially incongruent with the dominant cultures on their respective campuses must either assimilate to those dominant cultures or find membership in one or more cultural enclaves (i.e., subcultures) to maximize their likelihood of success in college. While Kuh and Love's propositions were the first alternative perspective of the persistence process offered

since Tinto's theory emerged, it was based on extant theory and literature rather than empirical data.

Museus and Quaye (2009) subsequently employed existing literature, Kuh and Love's cultural propositions, and the experiences of 30 college students of color at one predominantly White institution (PWI) to generate a new set of empirically grounded intercultural propositions to help explain the adjustment and persistence processes of racial/ethnic minority college students. This set of intercultural propositions indicates that the cultural dissonance that students experience is inversely related to their likelihood of persistence—with the term "cultural dissonance" being defined as the tension that results from incongruence between a student's home and campus cultures (Museus, 2008a). In addition, whereas Kuh and Love's (2000) propositions suggest that minority students who come from cultures incongruent with those on their campus must either acclimate to the cultures of campus or immerse themselves in one or more cultural enclaves to adjust, find membership in, and persist through college, Museus and Quaye's (2009) intercultural propositions posit that both individual (e.g., faculty, staff, and peer individuals) and collective campus agents (e.g., ethnic organizations, cultural centers, equal opportunity programs) play an important role in facilitating minority students' adjustment to, membership in, and persistence through their campus cultures. They also highlight individual and collective cultural agents' validation of racial/ethnic minority students' cultural backgrounds in facilitating their adjustment, membership, and persistence.

Inherent in these aforementioned perspectives (Hurtado & Carter, 1997; Kuh & Love, 2000; Museus & Quaye, 2009; Tinto, 1987, 1993) is the concept that racial/ethnic minority students must experience a period of adjustment to their respective campus cultures to develop a sense of belonging or membership on campus and to achieve success. Thus, these perspectives suggest that understanding the experiences of students of color requires the recognition that those students often encounter foreign cultures on their campuses and must make adjustments to understand and become a part of those cultures. Despite the importance of understanding these adjustment processes, quantitative examinations of minority student success often focus on measuring the impact of climate and students' involvement on outcomes (e.g., Cabrera, Nora, Pascarella, Terenzini, & Hagedorn, 1999; Museus, Nichols, & Lambert, 2008; Nora & Cabrera, 1996), while giving less attention to the cultural factors that might contribute to or hinder racial/ethnic minority students' adjustment to, membership in, and persistence through college.

ASIAN AMERICAN COLLEGE STUDENTS' SUCCESS

The aforementioned cultural perspectives can help inform an understanding of the experiences of Asian American college students. Congruent with the

overall relative invisibility of Asian Americans in higher education research and the inaccurate stereotypes about their universal success, however, is the fact that researchers who have empirically examined college student persistence typically exclude Asian Americans from their analyses (Yeh, 2004). In one of the few persistence studies that did include an examination of Asian American students specifically, Museus, Nichols, and Lambert (2008) provide some evidence that the concept of cultural integration might not adequately explain Asian American students' success in college. They examined a nationally representative sample of Asian, Black, Latino, and White undergraduates and concluded that involvement in the academic and social systems of campus were not significant predictors of Asian American students' completion of a bachelor's degree at four-year colleges. These findings, however, could be a function of the items used to measure academic and social involvement, which also excluded the previously mentioned modes of participation important to racial/ethnic minority students in college.

While existing evidence suggests that cultural integrity, or the affirmation of students' cultural identities, is an important factor in the experiences of students of color (Gonzalez, 2003; Guiffrida, 2003; Harper & Quaye, 2007; Maramba, 2008a, 2008b; Museus, 2008c), research examining the role of cultural integrity on the experiences of Asian Americans is sparse. The limited research that does exist on this topic, however, indicates that such integrity can positively shape those students' experiences (e.g., Kiang, 2002; Maramba, 2008b; Museus, 2008c). In a qualitative examination of 12 Asian American and 12 Black students at a PWI, for instance, Museus (2008c) found that ethnic student organizations facilitated the cultural adjustment and membership of Asian American college students, similar to the experience of their Black counterparts, at a PWI by providing spaces where those students could find cultural familiarity, vehicles through which they could express their cultural identities and advocate for their cultural groups, and a subculture that validated their cultural heritages. While these studies provide evidence that cultural integrity can positively shape the experiences of Asian Americans, much remains to be learned about the relationship between Asian American and other students' connections to their cultural heritage and success in college.

Empirical research also supports the hypothesis that the incongruence between racial/ethnic minority students' precollege and campus cultures, or the dissonance associated with that distance, can pose challenges. Indeed, while most existing studies do not necessarily employ cultural frameworks, they do indicate that students of color can experience difficulty finding membership in the dominant cultures of PWIs (Feagin, Vera, & Imani, 1996; Gonzalez, 2003; Lewis, Chesler, & Forman, 2000; Museus & Quaye, 2009). Lewis, Chesler, and Forman (2000), for example, interviewed 75 Asian American, Black, and Latino undergraduates at one PWI and concluded that they experienced pressures to conform to the dominant cultures of their campus.

Other researchers have found that racial/ethnic minority students who come from predominantly White precollege communities face fewer difficulties navigating the cultures of PWIs than those who come from more racially diverse or predominantly minority precollege environments (Guiffrida, 2003; Museus & Truong, 2009; Torres, 2003), suggesting that transitioning from predominantly White precollege to predominantly White college cultures may be easier than transitioning from predominantly racial/ethnic minority communities to the cultures of PWIs. While this evidence suggests that cultural incongruence might play a role in the experiences of college students of color, this relationship has yet to be empirically tested among students of color, including Filipino American college students.

Purpose and Significance of the Study

The purpose of this investigation is to examine the influence of cultural factors on Filipino American college students' sense of belonging. One overarching research question provided a foundation for the inquiry: How does culture influence Filipino American students' sense of belonging? Three additional questions guided the examination: (a) Is pressure to commit cultural suicide associated with a sense of belonging in college? (b) Are connections to cultures of origin associated with a sense of belonging? (c) Do pressure to commit cultural suicide and connections to cultures of origin indirectly influence Filipino American students' sense of belonging on campus via their impact on those students' adjustment to college?

Our investigation contributes to the existing knowledge base in three primary ways. First, this investigation addresses the invisibility of Asian Americans in higher education research and discourse by adding to the few existing studies on Asian American college students' experiences (Cress & Ikeda, 2003; Inkelas, 2004; Kiang, 1992, 2002; Lee & Davis, 2000; Lewis, Chesler, & Davis, 2000; Maramba, 2008a, 2008b; Museus, 2008b, 2008c; Museus, Nichols, & Lambert, 2008; Museus & Truong, 2009). Second, this examination challenges common, but oversimplified, generalizations of Asian American college students by enhancing existing knowledge of a specific ethnic population—Filipino American undergraduates—at a predominantly White institution. Finally, to the best of our knowledge, this inquiry is the first quantitative examination of the impact of several cultural factors, such as pressure to commit cultural suicide and connections to cultural heritage, on students' adjustment processes and sense of belonging in college.

Conceptual Framework

The conceptual framework for this examination emerged from the previous review of literature. The concepts of cultural incongruence and disso-

nance (Kuh & Love, 2000; Museus, 2008a; Museus & Quaye, 2009), cultural suicide and cultural integrity (Tierney & Jun, 1999), and sense of belonging (Hurtado & Carter, 1997) all informed the framework, which is displayed in Figure 1. Together, these constructs can be employed to examine the extent to which racial/ethnic minority students' connections to their cultural heritages and pressure to commit cultural suicide influence their sense of belonging.

The conceptual model hypothesizes that students' connections to their cultural heritages, pressure to commit cultural suicide, and the ease or difficulty with which students adjust to their campus cultures shape the extent to which they feel a sense of belonging to the cultures of their respective campuses. The model also posits that pressure to commit cultural suicide and connections to cultural heritage indirectly influence students' sense of belonging via their direct effect on the extent to which students experience cultural adjustment difficulties.

METHODS

This examination is part of a larger mixed-methods study focused on exploring the experiences of Filipino American college students at a single institution. The site of the study was a large, highly selective public research university located on the West Coast. At the time of this study, 19,088 undergraduates were enrolled at the institution. The ethnic composition was 37% White, 34% Asian, 8% Mexican American, 5% Filipino American, 2% Latino, 1% African American, less than 1% Native American, and 13% other. At the time of data collection, 956 Filipino American students were enrolled at the university—equivalent to approximately 5% of the total undergraduate population.

Participant Sample

We distributed 400 questionnaires to approximately 40% of the student population on the participating campus. One hundred and forty-three participants returned the survey, resulting in a 36% response rate. The age-range among Filipino Americans in the participant sample was 17–24. Thirty-nine percent of the sample consisted of first- and second-year students, while third- and fourth-year undergraduates constituted 61% of the participants.

With regard to gender, 57% were female and 43% were male. As for generational status, 16% are first-generation (born in the Philippines or immigrated to the United States at six years or older) and 81% are second-generation (born and raised in the United States or immigrated to the country at age five or younger). Moreover, 75% are first-generation college students, defined as those whose parents did not attend college in the United States. The average grade point average of all participants at the time of the study was 3.08.
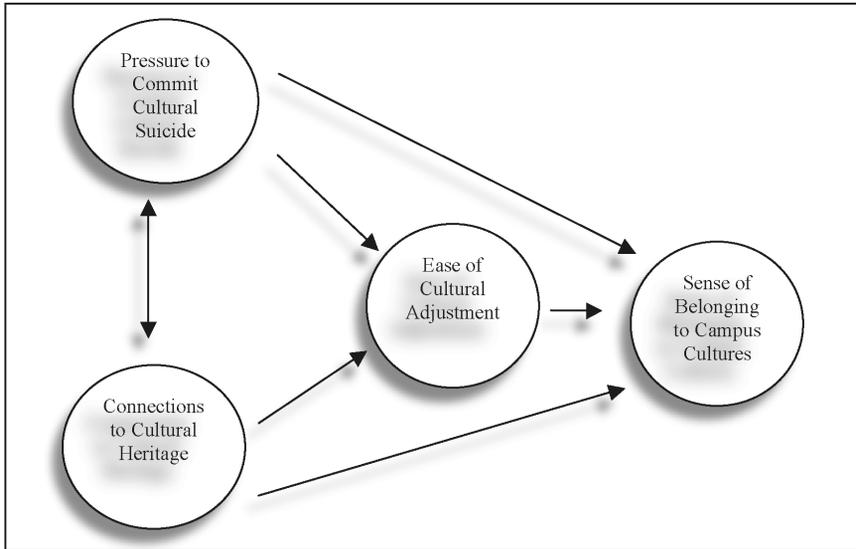
Figure 1. A Conceptual Model of Role of Cultural Factors on Sense of Belonging

Data Sources and Instrument

The survey instrument administered to participants consisted of questions regarding demographic information, cultural congruity, perceptions of campus climate, sense of belonging, and ethnic identity. All items included in the instrument were measured on a four-point Likert-type scale.

The demographic portion included questions about ethnic identification, class level, major, sex, and generational status. Especially relevant to our investigation and analysis were 14 questions that focused on cultural congruity and sense of belonging. The cultural congruity questions are based on measures used by Gloria and Kurpius (1996). The three "sense of belonging" measures are based on items originally developed by Bollen and Hoyle (1990) and subsequently used by Hurtado and Carter (1997) to study "sense of belonging" among Latino college students. They are now part of a national Cooperative Institutional Research Program survey administered by the Higher Education Research Institution at the University of California, Los Angeles.

Key Variables

The control variables incorporated into the analysis include students' gender, age, generation, year in college, and grade point average. Table 1 displays the variable definitions, alpha scores, and numerical codes for the four focal constructs in the model. Those four focal variables—two independent, one mediating, and one dependent construct—were included in the analysis and are described in this section.

As key independent variables, we included two exogenous independent factors. First, we developed a *pressure to commit cultural suicide* (alpha = .80) variable based on Tierney's discussion of the expectation that students must separate from their cultures of origin and assimilate to the dominant cultures of their campuses to be successful (Tierney, 1999). Thus, we defined pressure to commit cultural suicide as the pressure that students feel to sever ties with their cultural heritage or their cultural identities and conform to their campus cultures.

We created this latent construct using six items measured on a Likert-type scale that asked students the extent to which they felt that (a) they had to change themselves to "fit in" on campus, (b) depending on the ethnicity of their associates they had to change themselves, (c) their ethnicity was incompatible with that of other students on campus, (d) they were leaving family values behind by going to college, (e) their ethnic values were in conflict with what is expected at school, and (f) their language and appearance made it difficult for them to fit in on campus.

We labeled the second key independent construct *connections to cultural heritage* (alpha = .70), which is defined as the extent to which Filipino American participants maintained connections to their cultural heritages. We constructed this variable using three Likert-type survey items, which measured the extent to which students felt they could (a) talk to their family about friends from school, (b) talk to their family about struggles and concerns at school, and (c) talk to their non-Filipino friends about their family and culture.

As key mediating and dependent variables, we included two endogenous variables in the model and the current examination. The focal mediating variable was a construct that measured the *ease of cultural adjustment* (alpha = .69), which is defined as the extent to which students were able to easily adjust to the cultures of their respective campuses. We constructed this variable using five indicators, also measured on a Likert scale. They indicated the extent to which students experienced difficulties with any of the following: (a) separating from their family, (b) being lonely or homesick, (c) maintaining family relationships, (d) making new friends on campus, and (e) being isolated on campus.

Finally, the key outcome variable was *a sense of belonging to campus cultures* (.89), which was based on Hurtado and Carter's (1997) "sense of belonging" concept. We defined this construct as the extent to which our respondents felt part of the cultures on their campus and created it using three indicators measured on a Likert scale. Respondents indicated how much they (a) felt "part of" the campus community, (b) felt that they were "a member of" the campus community, and (c) felt a sense of belonging to the campus community.

Table 1

Key Variable Definitions, Alpha Scores, and Numerical Codes

Variable	Description and Codes
Independent	
Pressure to commit cultural suicid(alpha = .80)	This latent variable was constructed by combining six survey items measuring the extent to which students felt pressure to relinquish their ethnic identities and assimilate to the dominant campus culture, including the following: To what extent students felt (a) they had to change themselves to fit in on campus; (b) they had to change themselves depending on the ethnicity of the people they are with; (c) their ethnicity is incompatible with other students; (d) they are leaving behind family values by going to college; (e) their ethnic values are in conflict with what is expected at school; and (f) their language and appearance make it hard for them to fit in on campus. Each survey item coded: 0 = strongly disagree, 1 = disagree, 2 = agree, 3 = strongly agree.
Connections to cultural heritage (alpha = .70)	This latent variable was constructed by combining three survey items measuring the extent to which students were maintaining connections to their cultural heritage, including the following: To what extent students felt they could (a) talk to their family about friends from school; (b) talk to their family about struggles and concerns at school; and (c) talk to their non-Filipino friends about their family and culture. Each survey item coded: 0 = strongly disagree, 1 = disagree, 2 = agree, 3 = strongly agree.
Mediating	
Ease of cultural adjustment (alpha = .69)	A latent construct consisting of five survey items measuring the ease of students' adjustment to the cultures of their respective campuses, including the following: How difficult it has been (a) being separated from their family; (b) being lonely or homesick; (c) maintaining family relationships; and (d) making new friends on campus. Each survey item coded: 0 = very difficult, 1 = difficult, 2 = easy, 3 = very easy. The fifth item measured the frequency with which students (5) felt isolated on campus and was coded: 0 = always, 1 = sometime, 2 = seldom, 3 = never.
Dependent	
Sense of belonging to campus culture (alpha = .89)	A latent variable that was constructed using three indicators measuring students' sense of belonging to their campus cultures, including the following: The extent to which students (a) see themselves as part of the campus community; (b) feel that they are a member of the campus community; and (c) feel a sense of belonging to the campus community. Each survey item coded: 0 = strongly disagree, 1 = disagree, 2 = agree, 3 = strongly agree.

DATA ANALYSIS PROCEDURES

We analyzed the data in three phases: (a) the analysis of descriptive statistics, (b) principal components factoring, and (c) structural equation modeling analysis. In Phase I, we computed the means of each focal variable. We also disaggregated the data and compared the means of each focal variable across genders and generational status. Extant literature indicates that these elements are two major factors in the academic and social experiences of Asian American students (e.g., Abe & Zane, 1990; Maramba, 2008a). Thus, while our sample was not large enough to disaggregate data and conduct parallel structural equation modeling analyses to examine differential relationships among the constructs in our model across subgroups, we did disaggregate the data before computing descriptive statistics so we could understand whether there was any variation in experiences across gender and generation.

In Phase II of data analysis, we utilized principal components factoring with varimax rotation to reduce the number of measures to be included in the structural equation model. Because small samples can pose problems and hinder model convergence in SEM, our modest sample size made this reduction of variables necessary as the corresponding number of parameters to be estimated. Thus, we used the principal components analysis to decrease the number of constructs to be included in the structural model and to identify the indicators that most validly represent those constructs. All indicators with factor scores below .4 were omitted from the model. (See Table 1 for variables, alpha scores, and codes.) We used those four constructs, along with their indicators with factor scores above .4, to construct the structural model.

In Phase III, we conducted the SEM analysis. The use of SEM offers a number of advantages over other statistical techniques, including making it possible to assess overall model fit, examine indirect effects, and account for measurement error to improve the accuracy of parameter estimates (Bollen, 1989). First, we used the conceptual model and the four factors that emerged from the preceding principal components analysis to construct a structural model in the Amos structural equation modeling software program. We then fitted the structural model to the data using Maximum Likelihood Estimation. To handle missing data, we used Full Information Maximum Likelihood Estimation (FIML). It has been noted that FIML procedures are more consistent, more efficient, and less biased than other procedures (e.g., listwise or pairwise deletion) (Arbuckle, 1996; Little & Rubin, 1989; Muthén, Kaplan, & Hollis, 1987; Schafer, 1997). SEM permits the simultaneous regression of multiple dependent variables on multiple independent variables. Thus, while controlling for demographic characteristics, we regressed the sense of belonging to campus cultures construct on ease of cultural adjustment, pressure to commit cultural suicide, and connections to cultural heritage. In addition, we simultaneously regressed ease of cultural adjustment on pressure to commit cultural suicide and connections to cultural heritage.

Limitations

At least three limitations warrant consideration while interpreting our results. First, our target population was limited to Filipino American students at a single institution. Our findings, therefore, cannot be generalized beyond this population.

Second, we collected our data at a single point in time. Therefore, we could not account for time in the estimation of parameters. Nevertheless, we hypothesized relationships among constructs and developed our structural model using existing theory and prior research (Hurtado & Carter, 1997; Kuh & Love, 2000; Museus & Quaye, 2009; Tierney, 1999; Tierney & Jun, 1999) to ensure the most logical hypothesis of relationships among those factors.

Third, our data did not permit us to examine the impact of our independent cultural variables on persistence and degree completion. Thus, we cannot make confident assertions regarding the impact of connections to cultural heritage and cultural incongruence on actual persistence and graduation. Nevertheless, students' adjustment and sense of belonging are important factors in the college persistence process (Hurtado & Carter, 1997; Kuh & Love, 2000; Museus & Quaye, 2009), and much can be learned from examining those outcomes.

Findings

The results from the first phase of data analysis are displayed in Tables 2 and 3. With regard to connections to cultural heritage, women agreed more with the statements that they can talk to their family about their friends and talk to their friends about their culture, while men agreed more with statements that they can talk to their family about struggles and concerns at school; but these differences were small. The means and standard deviations of the answers to each key survey item, broken out by gender, are displayed in Table 2. Those statistics indicate that women in the sample reported slightly higher levels of pressure to commit cultural suicide, slightly higher levels of adjustment difficulty, and slightly lower levels of belonging on campus.

Table 3 displays differences across generational status. It appears that second-generation students felt the highest levels of pressure to commit cultural suicide and the lowest levels of connection to their cultural heritage. In the area of cultural adjustment difficulty, second-generation students surprisingly reported having the most difficulty making new friends, maintaining relationships with family, and dealing with feelings of isolation on campus, while first-generation students reported the highest levels of difficulty feeling homesick and being separated from their families. Finally, first-generation students reported the lowest sense of belonging to their campus cultures.

These results indicate that, overall, third-generation students reported the lowest pressures to commit cultural suicide and cultural adjustment difficulty

TABLE 2

SURVEY ITEM MEANS BY SEX

	Men (n = 61)	Women (n = 82)
Pressure to commit cultural suicide		
Feel like I have to change myself to fit in	1.12	1.17
Have to change myself a lot	1.10	1.16
Feel ethnicity is incompatible with other students	.97	.98
Family values are left behind by going to college	.88	.67
Ethnic values conflict with expectations at school	.98	1.06
Language and appearance make it hard to fit in	.85	.89
Connections to cultural heritage		
Can talk to family about friends	1.90	1.95
Can talk to family about concerns	1.79	1.67
Can talk to friends about culture	2.02	2.09
Ease of cultural adjustment		
Making new friends	1.91	1.83
Being separate from family	1.89	1.56
Being lonely or homesick	1.54	1.47
Maintaining relationships with family	1.88	1.81
Feeling isolated from campus	1.91	1.80
Sense of belonging to campus cultures		
See self as part of community	1.92	1.70
Feel like a member of community	1.90	1.72
Feel sense of belonging to community	1.70	1.56

in college, as well as the strongest connections to their cultural heritage and greatest sense of belonging. Only five students, however, fell into the third-generation category, so any differences must be interpreted with caution.

The Structural Equation Model

The final model explained 41% of the variation in the ease of students' cultural adjustment and 42% of the variation in students' sense of belonging to the cultures of their campus. The model-fit statistics generated by the structural model are included in Table 4. The final structural model produced a CFI of .97, TLI of .97, RMSEA of .03, and PCLOSE statistic of .97, all indicating that the model was a good fit for the data (Hu & Bentler, 1999).

Figure 2 and Table 5 each display the standardized coefficients associated with the paths from each independent to each dependent variable in the model. The standardized path coefficients represent the standard unit change in the dependent variable for each change of one standard unit in the independent variable. As expected, the direct standardized path coefficient

Table 3

Survey Item Means by Generational Status

	1st (n = 23)	2nd (n = 113)	3rd (n = 5)
Pressure to commit cultural suicide			
Feel like I have to change myself to fit in	.79	1.21	1.00
Have to change myself a lot	.93	1.16	1.00
Feel ethnicity is incompatible with other students	1.07	.99	.20
Family values are left behind by going to college	.79	.75	.60
Ethnic values conflict with expectations at school	.93	1.12	.60
Language and appearance make it hard to fit in	.71	.92	.60
Connections to cultural heritage			
Can talk to family about friends	2.00	1.82	2.80
Can talk to family about concerns	1.86	1.63	2.40
Can talk to friends about culture	2.00	2.06	2.40
Ease of cultural adjustment			
Making new friends	2.00	1.83	2.40
Being separate from family	1.64	1.74	2.20
Being lonely or homesick	1.14	1.58	1.40
Maintaining relationships with family	1.86	1.79	2.80
Feeling isolated from campus	1.86	1.81	2.40
Sense of belonging to campus cultures			
See self as part of community	1.71	1.83	2.40
Feel like a member of community	1.71	1.83	2.40
Feel sense of belonging to community	1.57	1.64	2.40

from ease of cultural adjustment to sense of belonging to campus cultures was positive and large (.43), and was significant at the .001 level. Thus, greater ease in adjusting to the cultures of campus was associated with a greater sense of belonging on campus.

The direct relationship between connections to cultural heritage (.06) and sense of belonging was statistically insignificant. Although the direct path of pressure to commit cultural suicide on sense of belonging failed to meet the test of statistical significance, the standardized path coefficient was -.15, which is larger than some relationships that have been found statistically significant in SEM analyses (e.g., Museus, Nichols, & Lambert, 2008). The failure of this path to be statistically significant might be due to the modest size of our sample. That is, smaller sample sizes make it more difficult to detect statistical significance than if larger samples are analyzed, and a larger

TABLE 4

MODEL-FIT RESULTS

	CFI	TLI	RMSEA	PCLOSE
Structural model	.97	.97	.03	.97

Note: Strong model fit is reflected by (a) CFI and TLI values greater than .95, (b) RMSEA less than .06, and (c) PCLOSE greater than .05 (Hu & Bentler, 1999).

sample may have produced statistically significant results. This possibility requires further investigation.

The structural equation modeling analysis also estimated the relationship between pressure to commit cultural suicide and connections to cultural heritage on the ease of students' cultural adjustment. With regard to the direct effects on cultural adjustment, pressure to commit cultural suicide was strongly and negatively associated with ease of cultural adjustment (-.47). That is, higher levels of perceived pressure to commit cultural suicide were related to more difficulty in adjusting to the campus culture. In addition, the connection to the cultural heritage construct was significantly and positively related to ease of cultural adjustment (.26). Put another way, the more students maintained connections with their cultures of origin, the greater ease they experienced in adjusting to college. In sum, the results of the structural equation modeling analysis indicate that cultural factors are
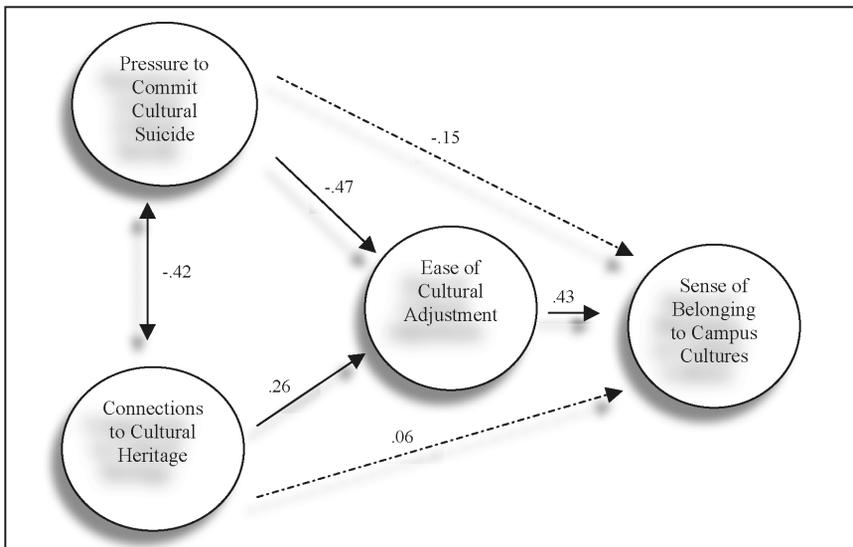

Figure 2. A Model of Role of Cultural Factors on Sense of Belonging

TABLE 5

DIRECT STANDARDIZED PATH COEFFICIENTS FOR EACH PREDICTOR ON EACH OUTCOME VARIABLE

Predictor Variable	Outcome Variable	
	Cultural Adjustment	Sense of Belonging
Pressure to commit cultural suicide	-.47***	-.15
Connections to cultural heritage	.26*	.06
Ease of cultural adjustment	---	.43**

Note: * indicates statistical significance at the .05 level
  ** indicates statistical significance at the .01 level
  *** indicates statistical significance at the .001 level

related to the sense of belonging experienced by Filipino American college students in our sample.

Moreover, the results suggest that the relationship between cultural factors (i.e., pressure to commit cultural suicide and connections to cultural heritage) might be mainly indirect through the adjustment process. That is, those factors might primarily be related to Filipino American students' sense of belonging in college indirectly, through their influence on the ease or difficulty that students encounter in the adjustment process. Specifically, greater pressure for Filipino American participants to commit cultural suicide was associated with greater difficulty in the adjustment process, which was, in turn, associated with a decrease in their sense of belonging on campus. Furthermore, one of the most compelling findings of the analysis is that Filipino American students' maintaining more connections to their cultural heritage was associated with greater ease in their adjustment to the cultures of their campus and, consequently, to a greater sense of belonging in college.

DISCUSSION

At least five major conclusions can be drawn from this investigation. The first conclusion emerges as a result of our review of literature. Despite common assumptions about the universal success of Asian American students, those individuals do indeed face challenges in college. Thus, we echo earlier assertions that it is imperative to include this population in higher education research and discourse (Museus, 2009; Museus & Kiang, 2009; Teranishi et al., 2004), including those discussions involving race, gender, culture, and climate. What this study adds to existing literature on Asian American undergraduates is evidence that Filipino American students face cultural

challenges that can pose major impediments to their adjustment to college and sense of belonging at their respective institutions.

Our second conclusion is related to the concept of culture. Specifically, this study reinforces earlier assertions about the importance and utility of studying culture (Kuh, 2001/2002; Museus, 2007, 2008a, 2008c; Museus & Quaye, 2009), particularly in understanding the experiences and outcomes of students who come from cultures (e.g., racial/ethnic minority, low-income, and first-generation) incongruent with those that traditionally exist on college campuses (e.g., White, middle-class, and non-first-generation).

While culture is often mentioned in discussions of college students (Kuh, 2001/2002; Kuh & Love, 2000; Kuh & Whitt, 1988; Museus, 2007, 2008a, 2008c; Museus & Quaye, 2009; Tinto, 1987, 1993), it is rarely the focus of rigorous systematic empirical inquiry. For example, while Tinto's theory of integration is based on an underlying set of cultural foundations, studies employing this theory as a framework typically focus on specific academic and social behaviors of students, rather than the perceptions, feelings, and thoughts related to those students' connections to their home and campus cultures.

Moreover, the limited empirical research that does focus on the role of culture in students' experiences is qualitative (e.g., Gonzalez, 2003; Murguía, Padilla, & Pavel, 1991; Museus, 2007, 2008c; Museus & Quaye, 2009). Quantitative analyses of cultural constructs are practically nonexistent. This study contributes to the knowledge base by offering an example of how quantitative techniques can be used to understand the impact of culture on the experiences of college students or, in this case, Filipino American college students.

Third, our study supports the argument that cultural suicide (Tierney, 1999; Tierney & Jun, 1999)—or the notion that students from cultures incongruent with those on their respective college campuses must detach from their traditional cultural heritages to succeed—is problematic for students of color. Alternatively, the findings provide support for the notion that cultural integrity (Tierney, 1999; Tierney & Jun, 1999)—or educational programming that engages the cultural backgrounds of racial/ethnic minority students—is critical in fostering success among those students of color. What this study adds to existing research is statistical evidence that students' connections to their cultural heritage predict and are positively associated with a greater sense of belonging in college. These findings also suggest a need to generate new and more culturally relevant models of college student development and success for nontraditional students in higher education.

Our fourth conclusion is that the results of our examination appear to support the proposition that the incongruence between students' cultures of origin and cultures of immersion, or the dissonance associated with that incongruence, can pose major challenges for those individuals. Kuh and Love (2000) proposed that such incongruence is inversely related to college

students' success, while Museus and Quaye (2009) asserted that the cultural dissonance associated with that cultural incongruence negatively influences racial/ethnic minority students' adjustment to, membership in, and persistence through college. While they provide some evidence that this might be the case, to the best of our knowledge, that proposition had not previously been empirically and statistically tested. One contribution of the findings of this study is that they provide statistical support for this proposition, at least with regard to Filipino American college students at the participating postsecondary institution.

Finally, the impact of connections to cultural heritage and pressure to commit cultural suicide on Filipino students' sense of belonging might be mainly indirect, via those students' experienced difficulty in the process of adjusting to college. In our model, pressure to commit cultural suicide and connections to cultural heritages significantly and indirectly influenced sense of belonging via their impact on cultural adjustment. This finding is congruent with other studies showing that environmental factors, such as campus climate, mainly influence student outcomes indirectly (Museus et al., 2008; Nora & Cabrera, 1996). Thus, we underscore the importance of using structural equation modeling techniques, which allow researchers to take complex indirect effects into account when analyzing the impact of culture on college students.

IMPLICATIONS FOR FUTURE RESEARCH

The findings of this study have several important implications for research and practice. First, it is clear that more research is needed on Asian American college students, including the role that culture plays in the experiences of Asian American undergraduates. Indeed, given the fact that the voices of Asian Americans are excluded from a majority of the research published in major higher education journals (Museus, 2009), it is necessary to generate more empirical evidence that can inform authentic understandings of this group. Specifically, it is important for researchers to conduct empirical inquiries that focus on the experiences and outcomes of specific ethnic subpopulations within this larger racial category.

Therefore, future research should test the relationships among these cultural constructs using larger participant samples and samples of other ethnic populations. Indeed, two limitations of this study are the size of the sample and the fact that the analysis was specific to Filipino American college students. With regard to sample size, as mentioned earlier, the insignificance of the direct paths of our independent variables on sense of belonging could have been due to our modest sample size. Analyses of larger student samples could provide a better indication of whether those cultural factors are directly associated with a sense of belonging, in addition to the indirect influence

they exhibit through adjustment processes. Moreover, these constructs and similar procedures could be used to determine whether the relationships found in this study are salient for other ethnic groups within the Asian American population.

Third, in addition to examining whether our model is applicable to other Asian American ethnic subpopulations, these findings could also be tested on other racial groups. While the findings of this study contribute to existing literature by providing quantitative evidence of the significance of cultural factors in the experiences of Filipino American students' adjustment and sense of belonging, we cannot speculate about whether the relationships found in this study are significant for Black, Latino, or White students. With regard to White undergraduates, although most of our discussion focused on racial/ethnic minority students, it is possible that first-generation and low-income White students also face increased difficulties adjusting to and finding membership in college as a result of precollege cultures that are incongruent with the traditional cultures found on their respective college campuses. These methods, therefore, could be used to examine Black, Latino, and White samples to understand the extent to which various cultural factors influence the adjustment and sense of belonging among those student groups.

Our fourth implication for research has to do with considering how multiple identities interactively influence the experiences of Asian American college students. Indeed, researchers have discussed how multiple identities—such as race, ethnicity, gender, socioeconomic status, and generational status—provide important frameworks through which Asian American students experience the cultures of their campuses (e.g., Museus, Maramba, & Ravello, in press). Therefore, future research could examine whether and how the influence of cultural factors on students' adjustment to and sense of belonging in college varies by ethnicity, gender, socioeconomic status, and generational status. We examined the descriptive statistics of different gender and generational subgroups in our sample; and while the differences are not drastic, some variation appears in how men and women or first- and second-generation students experience the cultural pressures and connections that we examined. While our sample was not large enough to allow us to disaggregate our data for the SEM analysis and explore whether the impact of cultural factors on Filipino American students' adjustment and sense of belonging differed across gender and generational subgroups, future examinations with samples that permit such disaggregated analyses would do much to inform current levels of understanding of the effects of cultural influences on the experiences of college students.

IMPLICATIONS FOR PRACTICE

With regard to implications for practice, institutional leaders must think about transforming the cultural fabric of their institutions to respond to increasingly diverse student populations. Historically, colleges and universities that espoused the value of diversity made efforts to bring diverse groups of students to their campuses but assumed that adapting to the college environment was the students' responsibility. However, there is a growing recognition that postsecondary institutions should make efforts to create campus cultures that facilitate the adjustment and success of diverse populations. For example, Kuh and Love (2000) noted that the increasing diversity of undergraduate student bodies raises questions about how much institutions of higher education should change and diversify the cultures of their campuses without compromising their core cultural values. Given the continuing and rapid diversification of the national population and entering student populations, institutional leaders must seriously consider how they can and should diversify the cultural fabric of their campuses through systemic institutional change while maintaining important campus values.

In addition, postsecondary educators should use cultural frameworks to create culturally relevant educational programs and practices designed to facilitate the adjustment and foster a sense of belonging for college students of color. Culturally relevant institutional programs and practices can permit students who come from cultures incongruent with those on their respective campuses to maintain ties with their cultural heritages while simultaneously adjusting to the cultures of their college campuses. Unfortunately, college students are often left to create culturally relevant programs and activities on their own initiative using tools such as ethnic organizations.

The responsibility to create culturally relevant programs on campus, however, should not always be placed on the shoulders of students. Given the fact that postsecondary educators understand student development processes, their initiative and guidance in the creation of culturally relevant programs can help students develop activities that both validate those undergraduates' cultural backgrounds and achieve important educational outcomes.

To effectively create culturally relevant programs and practices, postsecondary educators must (a) understand the cultures from which their students come, and (b) incorporate the values, beliefs, and traditions of those cultures into their educational programming. Indeed, recent research indicates that college educators' understanding of racial/ethnic minority students' backgrounds and experiences can be particularly important in those educators' effectiveness at fostering success among students of color (Museus & Neville, in press). Scholars have also shown that incorporating the cultural backgrounds of Asian American and other racial/ethnic minority students into educational programs and practices can have a substantial impact on the

experiences and outcomes of those students (e.g., Kiang, 2002). Therefore, by understanding and intentionally incorporating the cultural backgrounds of students into educational programs and practices, postsecondary educators might be able to more effectively foster success among all of their students, regardless of their racial or ethnic backgrounds.

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