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Theoretical Foundations and a Research Agenda to Validate Measures of Intercultural Effort

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Hundreds of thousands of students in the United States have completed surveys that measure their "engagement" in college. These are the concepts gauged by two of the major higher education assessment tools in use today: the National Survey of Student Engagement (NSSE) and the Community College Survey of Student Engagement (CCSSE). The results of these surveys are intended to inform colleges and universities about student behaviors, particularly those involving students in educational best practices, in order to help colleges educate students more effectively. Engagement, as well as the related concept of involvement, which is measured by the student surveys of the Cooperative Institutional Research Program (CIRP), have the concept of "student effort" as a foundational starting point (Wolf-Wendel, Ward, & Kinzie, 2009). By emphasizing student investment of time and effort, the student effort construct roots these instruments in the economic theory of human capital.

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This point is well illustrated in the following quotation from the introductory chapter of the Community College Student Experiences Questionnaire (CCSEQ) manual (Pace, 1999), which utilizes the economic language of investment and the conversion of capital:

> All learning requires time and effort by the learner. What students learn in college will depend to a considerable degree on the quality of effort they *invest* in the college experience. This is measured by how much they do with respect to *capitalizing* on what the college offers. (pp. 1–2; emphasis ours)

The constraints placed on such investments by students who experience cultural incongruence, racial discrimination, or stratified workforce opportunities are not considered. With human capital as the theoretical starting point, the construct of student effort lacked recognition of the effort needed to counter the well-documented negative pressures experienced by members of racial-ethnic groups that are in the minority at predominantly White institutions (PWIs), which Tanaka (2002) calls "intercultural effort."

Wolf-Wendel, Ward, and Kinzie (2009) recently reported in the *Journal of College Student Development* on interviews with the architects of the three most prominent concepts in student development theory: involvement (Alexander Astin), engagement (George Kuh), and integration (Vincent Tinto). Other scholars who have "applied the concepts in their research" were also interviewed (p. 409). The results of this study depict a growing awareness of the need to revise these concepts and the assessment instruments based on them. Of particular note in this respect are the comments of two interview respondents, Tinto (p. 424) and Sylvia Hurtado (p. 425), who emphasized that new conceptualizations should aim to gauge a student's "sense of belonging" (Hurtado & Carter, 1997). This awareness will no doubt lead to the next generation of student development theories and assessment surveys that will measure a broader range of factors to determine institutional effectiveness in ensuring a sense of belonging, membership, and validation among students from all racial-ethnic groups. Several recent studies indicate that this research is already underway (Barnett, 2011; Harper, 2009; Museus & Maramba, 2011; Museus & Quaye, 2009; Nuñez, 2009).

In this paper, we contribute to this emerging research agenda by elaborating on the need to measure student experiences of racial bias on college campuses and institutional effectiveness in reducing institutionalized racism (Chesler & Crawfoot, 1989; Jones, 2000; Kleinman & Copp, 2009; Sue et al., 2007; Yosso, Parker, Solórzano, & Lynn, 2004; Yosso, Smith, Ceja, & Solórzano, 2009). Tanaka (2002), discussing "quality of effort," as measured in Pace's College Student Experiences Questionnaire (CSEQ), explains the problem of treating college campuses as culturally neutral spaces and ignoring the

intercultural effort which is a drain on minoritized[1] students' energy, time, and ability to succeed:

> Pace's [quality of effort] construct can be misused by researchers if they choose not to examine the underlying cultural norms of the institution, thinking simply that the more you immerse yourself in the general activities of the campus, the more likely you are to "persist" and do well academically. But by ascribing to every campus the same "universal" quality of a culturally neutral space, that researcher would run the risk of *under*-estimating the differential effects of campus culture on students who are not members of the dominant group and a parallel risk of *over*-estimating the importance of effort where students in fact think that further engagement would only harm their sense of self-worth. (p. 277)

The concept of engagement is particularly prone to this risk because the engagement benchmarks are based on indicators of educational "best practices" without consideration of the racialized "bad practices" that minoritized students experience as harmful to their self-worth. Numerous empirical studies illustrate that these bad practices exist and are harmful to students' sense of belonging and educational investments (see e.g., González, 2001; González, Stone, & Jovel, 2003; Howard-Hamilton, Morelon-Quainoo, Johnson, Winkle-Wagner, & Santiague, 2009; Martin, 2009; Nuñez, 2009; Schwitzer, Griffin, Ancis, & Thomas, 1999; Spencer, Noll, Stoltzfus, & Harpalani, 2001; Yosso, Smith, Ceja, & Solórzano, 2009). Further, these harmful practices can exist alongside best practices; for example, a constructivist curriculum based on active learning can still be color-blind and fail to be culturally inclusive, conditions that minoritized students may experience as invalidating (Sue et al., 2007; Yosso, Smith, et al., 2009).

Wolf-Wendel, Ward, and Kinzie (2009) have already observed, based on their interviews with experts in the student development field, that an important concern about the major student development theories is "the extent to which they fail to represent the experiences of students historically underrepresented in higher education" (p. 422). This critique is not new (see, e.g., Hurtado & Carter, 1997; Hurtado, Milem, Clayton-Pederson, & Allen, 1998; Rendón, Jalomo, & Nora, 2000; Tanaka, 2002; Tierney, 1992). Further, the construct of engagement does measure interactions among students of different racial and ethnic backgrounds and in that way gives attention to issues of multiculturalism and diversity. What is missing is explicit attention to the possibility that campuses are imposing constraints on minoritized students through racially biased practices and an assessment instrument to

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[1]Following Gillborn (2005), we use "minoritized" rather than "minority" to emphasize that certain racial-ethnic groups are assigned minority status through the actions of more dominant groups.

measure those racially minoritizing practices. The implicit assumption, in the absence of such assessments, is that institutional racism or racial bias does not exist on college campuses—an unwarranted assumption, given the history of racism in postsecondary education in the United States (Harper, Patton, & Wooden, 2009; Martin, 2009; Olivas, 2005; Yosso, Parker, et al., 2004).

Wolf-Wendel, Ward, and Kinzie (2009) conclude that higher education researchers should "proceed cautiously" (p. 426) towards revisions and new approaches. They quote Kuh as saying that the precision of the National Survey of Student Engagement (NSSE) measures is not as important as leveraging the NSSE results for institutional change and to "change the way people talk and think and act about what matters to collegiate quality and student learning." Acknowledging that "there are things about NSSE that aren't perfect in terms of its measures," Kuh nevertheless places greater importance on obtaining consistent survey results over time. "If we were doing it again or we weren't worried about people using it over time we would change things now. We would add or subtract things—but when you are in year eight people don't want you to change things" (p. 421).

In contrast, we conclude that the research needed to develop alternative measures to help institutions understand how to reduce institutional racism and racial bias (Chesler & Crawfoot, 1989) should be taken up with urgency. The use of existing survey measures, based as they are on an incomplete picture of student effort, can lull campuses, assessment advocates, and policymakers (see, e.g., Dwyer, Millett, & Payne, 2006; U.S. Department of Education, 2006) into a false sense that they are getting a clear picture of what is needed to address racial-ethnic disparities in college completion. Survey measures can be reliable without being valid, and interpretations of survey results based on invalid measures are also invalid. By omitting measures of what campuses are doing to alienate students, existing measures have the potential to do more harm than good.

To achieve equitable practices and outcomes among racial-ethnic groups, colleges have been called on to examine their own institutional cultures, including dynamics of power, dominance, authority, and voice, and to adopt norms that are inclusive of diverse cultures (Osei-Kofi, Richards, & Smith, 2004; Rendón, 1992, n.d.; Tanaka, 2002; Tierney, 1992; Tierney & Hagedorn, 2002). Assessment tools are needed to assist institutions in measuring their effectiveness at becoming more culturally inclusive. The dimensions of the negative educational practices and climates that need to be measured have been described in multiple ways by a wide variety of scholars, including as student perceptions or experiences of racism or marginalization (Cabrera, Nora, & Castaneda, 1993; Harper & Hurtado, 2007; Hurtado, Milem, Clayton-Pederson, & Allen, 1998; González, Stone, & Jovel, 2003; Nora & Cabrera, 1996; Tanaka, 2002), feelings of isolation (Schwitzer et al., 1999) or alienation (Alford, 2000), cultural "distance" between the culture of origin and

the culture of immersion (Kuh & Love, 2000; Museus & Quaye, 2009), difficulty developing a sense of belonging in mainstream institutions (Hurtado & Carter, 1997), lack of voice and disparities in the distribution of power in classrooms (Osei-Kofi, Richards, & Smith, 2004), loss of connection to family (Rendón, 1993; Rendón, Jalomo, & Nora, 2000), loss of support of "significant others" (Nora, 2001–2002), microaggressions (Sue et al., 2007; Yosso, Smith, et al., 2009), and cultural suicide (Museus & Maramba, 2011).

Unlike the many complex problems addressed by educational researchers, the solution to the problem of construct underrepresentation in the major assessment surveys is readily apparent in less well known survey instruments that do measure racial bias and discrimination. This article reviews and categorizes such instruments to highlight them as a resource for the development of a new generation of assessments that will be more informative to help institutions reduce racially biasing practices. Our starting point is not that these instruments are more reliable or valid than existing instruments. Rather, they serve to make clear the constructs and measures that have been omitted from the engagement surveys. A comprehensive research agenda is needed to develop, pilot test, and validate new instruments that include measures of intercultural effort (Museus & Maramba, 2011; Nuñez, 2009; Tanaka, 2002). We contribute to that agenda through this review and analysis.

Before presenting the review of existing instruments, we provide a statement of the problem of study in terms of the issue of construct validity. In order to bridge the theoretical foundations of the concept of student effort, which is based on human capital theory, and the concept of intercultural effort, which is based on cultural and critical theories, in the conceptual framework section, we first describe the historical tension between economic theories of capital (human, social, and cultural) and the cultural theories that critique them. Drawing on behavioral economics, we then model discrimination as a constraint on the postsecondary education (human capital) investments of students who encounter discrimination, adopting this approach to provide clarity on the measurement task that must be taken up.

In sum, this paper has three main sections following this introduction: (a) a statement of the problem in measurement terms, (b) a conceptual framework bridging human capital theory and cultural theories of discrimination, and (c) a review of existing survey instruments measuring discrimination or cultural effort. A brief conclusion offers a summary of our purpose in presenting this analysis.

STATEMENT OF THE PROBLEM

As argued by Porter (2011), the evidence that inferences about institutional effectiveness based on the results of surveys of student engagement is not strong. The omission of measures of student effort in countering racial bias

is particularly problematic and represents what measurement theorists call "construct underrepresentation" (Goodwin & Leech, 2003). Porter also questions the validity evidence obtained from the content of the National Survey of Student Engagement (NSSE) benchmarks, asserting that it is questionable due to the engagement survey's lack of theoretical justification, immense content domain, and vague justification for item inclusion. More broadly, he has critiqued the NSSE for lacking evidence of validity based on analysis of the response processes, internal structure, and relations to other variables.

These arguments concerning the validity evidence of the NSSE are also applicable to the Community College Survey of Student Engagement (CCSSE), because the five CCSSE benchmarks are derived from and closely related to NSSE's five benchmarks. Both instruments aim to measure the constructs of academic challenge, active and collaborative learning, and student-faculty interaction. Whereas the NSSE measures supportive campus environments, the CCSSE measures supports for learners. "Student effort" is one of the CCSSE's five benchmarks. The NSSE, in contrast, does not label any set of its indicators as "student effort." Instead it includes indicators similar to those included in the CCSSE construct of effort in the "level of academic challenge" and "active and collaborative learning" scales, such as frequency of hours studied, reports written, or hours spent tutoring others (Carini, Kuh, & Klein, 2006; *Engagement by Design,* 2004; Pascarella, Seifert, & Blaich, 2010).

The theoretical construct of "student effort" is foundational to the indicators and response scales of the engagement surveys, which measure frequency of effort in various academic, collegiate, and interpersonal activities. Yet according to Tanaka (2002), the measures omit the important construct of intercultural effort. Therefore, in order for the engagement benchmarks to be considered an inclusive "student effort" instrument, they would need to measure intercultural effort. An inclusive instrument would have the ability to measure all aspects of "student effort" including latent qualities such as effort to counter the effect of marginalizing experiences within the educational environment. The practical implications of creating a more inclusive instrument would be an improved reading of institutional effectiveness in evoking "student effort."

The meaning of validity has evolved over the last 50 years, moving from a triad model of construct, content, and criterion-related validity types to a unified, all-inclusive model focused on construct validity (Shepard, 1993). According to the most recent (1999) *Standards for Educational and Psychological Testing,* the current meaning of validity is based on a unified construct of validity that emphasizes the use of "validity evidence" for reaching valid inferences. There are five interrelated types of validity evidence: (a) evidence based on survey or test content, (b) evidence based on response processes, (c) evidence based on the internal structure of the survey or test items, (d) evidence based on the relationship of data obtained using the instrument to

similar measures, and (e) evidence based on the consequences of using survey or test results for decision making. Validity itself is defined as "the degree to which all of the accumulated evidence supports the intended interpretation of the test scores for the intended purposes" (*Standards,* p. 11). A survey or test is not said to be valid or invalid. The inferences made by interpreting the data obtained by using an instrument are said to be valid or invalid. Thus, the construct representation and content of any survey are critical starting points for assuring validity.

Evidence based on the content of an instrument is analyzed to establish the content domain of a given construct. This type of validity evidence is obtained through logical analyses and evaluations of a measure's content including survey and test items, formats, wording, etc. These analyses are conducted to determine content sufficiency, biases, relevancy, and the degree to which the content is mapped onto the defined construct. Evidence based on test content is also analyzed for possible "construct underrepresentation" and cultural biases (Goodwin & Leech, 2003).

Validity evidence based on test content requires the evaluation of possible cultural bias, inadvertent or purposeful. The engagement construct reveals value assumptions when only the construct of "good educational practices" is conceptually mapped onto "student effort" without consideration of the possibility that colleges engage in harmful educational practices. The theoretical construct of "student effort" must reflect "student effort" in its entirety, since "it is the theory that guides the selection and interpretation of evidence" (Moss, 2007, p. 472). Shepard (1993) emphasizes that "value assumptions shape how research questions are framed, what data are gathered, and how results are interpreted" (p. 424). It should be noted that these value assumptions also impact the respondent or test participant, since "construct labels can smuggle in whole theories without test users being aware of the choices they have made" (Shepard, 1993, p. 425). Without the inclusion of intercultural effort, the engagement construct lacks validity evidence based on test content, demonstrating "construct underrepresentation" (Goodwin & Leech, 2003) and cultural bias.

The problem of study addressed by our analysis, therefore, is to determine appropriate methods by which to improve the construct representation of postsecondary assessment instruments.

Conceptual Framework

Theories of Capital in Tension with Critical and Cultural Theories

Understanding the complexity of the barriers to educational access and attainment has evolved over time since the inception of Great Society programs in the 1960s to promote equality of opportunity. The early programs

were rooted in human capital theory and ideology (Hansen & Stampen, 1981; Slaughter, 1991; St. John, 2003). Therefore, the early federal financial aid and student support services programs aimed to reduce financial and academic barriers to college enrollment and adopted the economist's mindset of what is needed to make investments in education: time, money, and ability (Becker, 1976).

With Coleman's (1988) sociological extension of human capital theory came the concept of "social capital" and a new focus on networks of information. Whereas the economic approach viewed students as individual agents making rational investment decisions, Coleman's work added recognition of the important role of parental education and family advisors in connecting students to valuable social networks that promote educational achievement. Colleges subsequently developed advising, orientation, and pre-college outreach programs (Tierney & Hagedorn, 2002) to create information and mentoring networks for students whose family and community networks were not linked to higher education resources. These strategies were consistent with institutional retention practices built on the insights of theories of student integration and institutional fit (Tinto, 1975, 1987), in that they sought to facilitate student assimilation into the new world of college.

Around the time that Coleman (1988) introduced the concept of social capital, Bourdieu (1986) launched a critique of the dominance of human capital theory—what he called the "economism of man"—in educational and social policy. He metaphorically described "social capital" and "cultural capital" as essential and largely invisible forms of "capital," or political advantage, which serve to give dominant groups control of greater shares of educational resources. Bourdieu's use of the term "social capital" differed from Coleman's. Whereas Coleman described the productive social value and advantages of networks and certain forms of social relations, Bourdieu was primarily focused on illustrating their function to perpetuate social hierarchies and unequal access to education and employment. Cultural capital, Bourdieu argued, is embedded in an individual's ability to process the meaning of physical and historical cultural icons, to speak the dominant language and interpret implicit and explicit meanings of academic and bureaucratic discourse, and to hold high educational aspirations without doubt of the legitimacy of one's aspirations.

Faced with the sobering observation that gaps in postsecondary educational attainment among Whites, Blacks, and Latinos in the United States have not been substantially altered despite decades of equal opportunity programs (*Empty Promises,* 2002), educators adopted the concept of cultural capital to examine cultural barriers to postsecondary attainment (Shaw, Valadez, & Rhoads, 1999; Tierney & Hagedorn, 2002). Unfortunately, Bourdieu's concept was often adopted within the prevailing strategy of assimilation or

as a celebration of diverse cultural values, without attending to his central argument concerning differences in economic and political power among racial and class groups (Lubienski, 2003). Bourdieu challenged the view that educational investments of time, ability, and money were made in a culturally neutral field (McDonough, Ventresca, & Outcalt, 2000), but the application of that critique morphed into programs that sought to convey cultural information and "assets" to "at risk" students (Gándara, 2002; Tierney & Hagedorn, 2002) who were viewed as arriving at the gates of college with cultural deficits (Bensimon, 2005, 2007). The concept of cultural capital was incorporated into human capital ideology rather than serving as a critique of that ideology as Bourdieu had intended.

Tanaka (2002) interjected a lost emphasis on the intersections of power, culture, and the assessment of institutional practice in higher education. He defined power as (a) political, (b) discourse-based, and (c) resulting from a sense of connectedness with others (p. 268). Using Tanaka's distinctions, it can be noted that, in practical application, "cultural capital" programs in higher education drew primarily on the discourse-based conceptualization of power to attempt to make explicit the "funds of knowledge" (Stanton-Salazar, 1997) that students need to succeed in college to solve problems, interact with people in power, and engage in academic activities. Academic funds of knowledge are specialized and differ from the funds of knowledge that members of racial-ethnic minority groups may acquire and use proficiently in their home communities (Moll, Amanti, Neff, & Gonzalez, 1992). The view that academic funds of knowledge are necessary to ensure competency in higher education was accepted into mainstream thinking and incorporated into academic advising and mentoring programs, which proliferated in attempts to reduce cultural barriers to college access and participation (Swail & Perna, 2002).

However, throughout this period, less attention was given to the loss of power that students incurred when their connectedness to family and community was lost. The concepts of engagement, integration, and student effort took hold among higher education practitioners as the critical ingredients for student success (Bensimon, 2007). There were notable exceptions, including work by Rendón (1992), who emphasized cultural loss in a poignant personal essay and in theories of "validation" (Rendón, 1993; Rendón, Jalomo, & Nora, 2000), and by Hurtado and Carter (1997), who emphasized that the loss of sense of belonging to home communities can be quite damaging to students' prospects of success in college. As is evident from recent studies, these constructs are now being operationalized as survey items in surveys of college student experiences.

For example, Nuñez (2009) analyzed data from the Diverse Democracy Project, which included indicators of Hurtado and Carter's (1997) "sense of

belonging" construct, as well as perceptions of cross-racial interactions and of a hostile campus climate, to examine Latino students' use of intercultural capital to negotiate college transitions. Similarly, Museus and Maramba (2011), drawing on the concepts of sense of belonging, cultural integrity, and cultural dissonance (see also Museus & Quaye, 2009), modified existing measures from the Cooperative Institutional Research Program (CIRP) survey and other sources to examine the impact of "pressure to commit cultural suicide" and "connections to cultural heritage" on "ease of cultural adjustment" and "sense of belonging on campus" among Filipino American students.

Barnett (2011), drawing on Rendon's construct of "validation" (Rendón, 1993; Rendón, Jalomo, & Nora, 2000) and Tinto's (1987) reframing of the concept of integration as "competent membership," tested measures of faculty validation of community college students in the classroom on students' psychological sense of integration and intent to persist in college. The resulting survey included items indicating that respondents personally felt "known and valued," "accepted," and encouraged to "openly share" their views, as well as perceptions of racial climate, as expressed for example in the indicators: "People of color are encouraged to contribute to the class discussion" and "My instructors understand that students come from different backgrounds."

However, these survey instruments have, to date, been tested on samples that are small relative to the widespread use of the engagement surveys. In addition, the analyses involved particular subsamples: Filipino Americans in Museus and Maramba's (2011) study, Latinos in Nuñez's (2009) study, and community college students in Barnett's (2011) study. The Higher Education Research Institute's Diverse Learning Environments (DLE) Survey (2009) involves larger samples and includes indicators of institutional climates for diversity, but does not directly measure the construct of intercultural effort. These instruments deserve further development and a broader validation effort in larger samples involving multiple racial-ethnic groups. The review of a broader set of measures, in the section that follows below, suggests other indicators that can be tested for inclusion as these instruments are developed. Before presenting that review, however, we demonstrate how racial discrimination can be modeled as a constraint on human capital investments in postsecondary education.

This model clarifies the measurement tasks that must be taken up to develop assessment surveys that will measure intercultural effort in addition to the forms of student effort that are currently being measured in terms of time invested studying and engaging in other academically related behaviors. Collecting data to measure intercultural effort will involve surveying college and university faculty, staff, and administrators, as well as students themselves, in order to capture institutional norms and practices that hinder or facilitate the success of minoritized students.

An Economic Framework for Inclusive Measures of Student Effort

Although two major reviews of economic theory as applied to higher education research and policy do not consider racism as a constraint on investments in human capital (DesJardins & Toutkoushian, 2005; Paulsen & Toutkoushian, 2008), behavioral economists, led by Nobel Prize winner George Akerlof and co-author Rachel Kranton (Akerlof & Kranton, 2000, 2002), are beginning to incorporate racial bias into economic thought through a focus on the role of identity and identity development in educational choices and investments (Akerlof & Kranton, 2000, 2002; Kaufman, 1999; see also Davis, 2007). Akerlof and Kranton (2002) emphasize that schooling—the context of their analysis is K-12 education—and educational investments involve two important choices: students "choose their social category, and they choose their effort in school. When choosing categories, students try to fit in. They consider the match between their own characteristics and the ideal characteristics [of peer groups and the school]." When a student's social category matches that of the ideal student, the student experiences a sense of fitting in and, if not, the student experiences a loss of self-image. "To avoid a loss in self-image, a student rejects the school and consequently exerts low levels of effort" (p. 1169). As far as it goes, this analysis does not differ substantially from Tinto's theory of integration and student drop-out (1975, 1987). However, Akerlof and Kranton (2002) go further by attributing rejection of a school (or, in this application, college) to a student's perceived assignment to social categories (including racialized categories), with differential social status and their incorporation of that analysis into an economic framework of rational choice. They argue: "Individuals then gain or lose utility as they belong to social categories with high or low social status and their attributes and behavior match the ideal of their category" (p. 1168). In other words, if students perceive that they do not fit the social ideal of a mathematician, for example, they will exit the math major. This example is purposefully selected because it illustrates how racism operates to stratify educational opportunity. Martin (2009, citing Bonilla-Silva), through his studies of racial and mathematics identity, defines racism as "the placement of people in racial categories [involving] some form of hierarchy that produces social relations between the races" (p. 323). This definition is important because it highlights that racism is not only the result of individual behaviors but also of institutional practices that assign students to categories and convey the characteristics of ideal social types. (See also the tenets of critical race theory; two resources are Harper, Patton, & Wooden, 2009; Yosso, Parker, et al., 2004). Intercultural effort, then, can be thought of as the effort to counter idealized academic social categories that create hierarchies based on race.

Figures 1 and 2 introduce a conceptual framework to guide the measurement of intercultural effort and its effects on educational investments. Figure 1 reproduces an example, using what economists call indifference curves, that was first presented in Paulsen and Toutkoushian's (2008) "diagrammatic exposition" of "economic models and policy analysis in higher education." The indifference curves depicted in the figures represent the utility of consumption of various goods and services to satisfy the wants of individual decision makers, who are assumed to be interested in maximizing their utility (or satisfaction). The points on curves at higher values on the X and Y axes represent higher levels of utility. (For a fuller discussion of indifference curves, see Ehrenberg & Smith, 1993; Paulsen & Toutkoushian, 2008).

Paulsen and Toutkoushian (2008) indicated that Figure 1 depicts "the effects of different preferences for higher education" between Black and White students (p. 7). It illustrates a situation which explains the lower college-going rates of Black high school graduates (62.5%) relative to White graduates (68.8%) by a lesser preference for higher education among Black graduates. In this example, both Black and White high school graduates experience the same "budget constraint" line. Therefore, the intersection of budget constraints and the possible combinations of education and other goods to satisfy a student's wants occur along the same constraint line for Black and White students; but the maximum point of utility (denoted by the point of intersection of the curve and the constraint line) occurs at a lower point of educational consumption for Black students (B) relative to White students (W). This relationship is denoted by the higher position of the Black graduate indifference curve towards investments in other goods and services (shown on the Y axis) rather than in education (shown on the X axis).

Paulsen and Toutkoushian (2008) note that three policy levers are available to increase investments in higher education: "(a) change the preferences of the decision makers; (b) change the decision maker's level of financial resources; and (c) change the relative prices of the decision maker" (p. 8). The policy lever of reducing students' experiences of racial discrimination is another way to change the relative prices of minoritized student and majority student decision makers, a point not observed by Paulsen and Toutkoushian but one that we emphasize in modifying their illustration in Figure 2. We make this addition because, in the absence of explicit attention to the possible effects of racial bias in reducing students' preferences for education, the analysis leaves room for an interpretation that the lower preferences of Black high school graduates for education, as depicted in the example, are racially determined by characteristics of Black culture.

Figure 2 explains the lower college-going rates of Black high school graduates relative to White high school graduates by factoring in the effects of discrimination (D). In this diagram, minoritized (M_i) and majority (M_a)
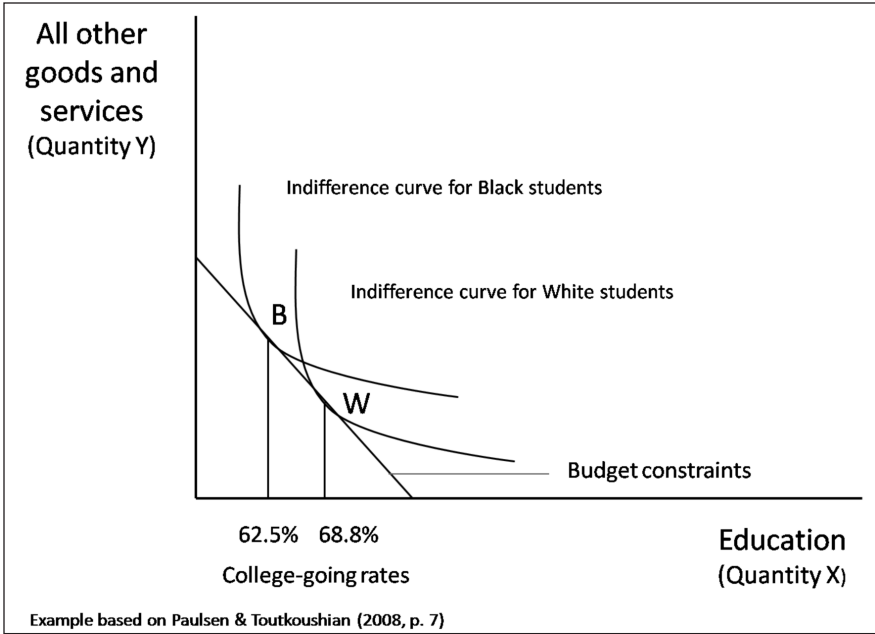
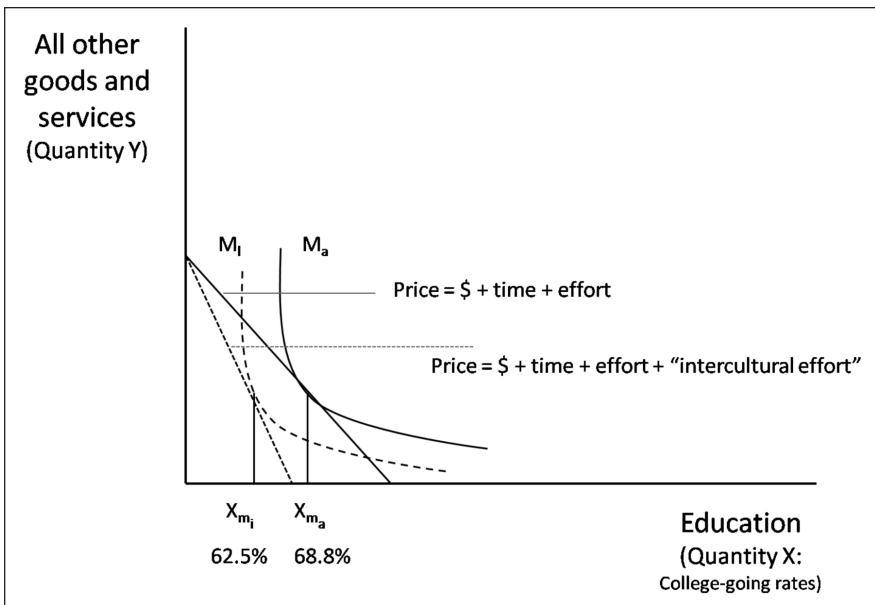Figure 1. Effects of "Different Preferences" for Higher Education

Figure 2. Minoritized Students Face Higher Prices for Higher Education due to Cost of Discrimination

students have the same preferences for education versus all other goods and services. These preferences are reflected in the identical shape of the indifference curves. The indifference curve for minoritized students is placed to the left of the indifference curve for majority students because the higher prices faced by minoritized students create a more restrictive budget constraint, creating a point of intersection (X_{Mi}) where utility is maximized at a lower level of investments in education than that exhibited by majority students (X_{Ma}). The higher prices faced by minoritized students include the costs of countering discrimination. The effort entailed in countering threats to self-worth is the intercultural effort described by Tanaka (2002). In effect, having to pay more, minoritized students purchase fewer units of education. As incorporated into economic modeling by Akerlof and Kranton (2002), the higher price is paid as a psychic cost, experienced as a loss of self-worth due to discrimination.

It is important to note that we distinguish the price of discrimination and the cost paid in terms of intercultural effort as distinct from the costs of money, time, and effort paid by all students. Means-tested financial aid improves the relative position of the budget constraint line for minoritized students who also have financial need, but it does not reduce the costs of discrimination. As explored in recent studies (Museus & Maramba, 2011; Nuñez, 2009), minoritized students may also concurrently experience a greater loss in a sense of belonging to their non-academic communities (families, workforce, etc), compared with majority students, as they invest time in education. This loss would be diagrammed by different slopes of the indifference curves, illustrating the relative tradeoffs individuals make by their investments in education versus all other goods and services. Minoritized students would give up more on the Y axis relative to majority students to make the same investments in education. To change these conditions, campus environments would need to be culturally congruent for both minoritized and majority students.

Economists assume a universal rationalism that treats members of all racial-ethnic groups as seeking the benefits of a good life, however individuals define those benefits. Where observed behaviors seem to imply otherwise, they are attributed to differential constraints and opportunities (where ability, time, and money structure those opportunities) rather than to cultural differences. An emphasis on measuring constraints as an explanation for racial-ethnic inequities in college participation and completion is consistent with economic policy analysis, which, as Paulsen and Toutkoushian (2008) point out, generally focuses on "educational policies that affect the constraints faced by decision makers rather than their preferences." Paulsen and Toutkoushian continue:

> Economists certainly acknowledge that changing preferences could change the equilibrium point [for investments in education], and that preferences can and do shift over time. However, this approach is not often used by economists who are involved in higher education policy analysis because the field of economics has relatively little to contribute to our understanding of how the preferences of decision makers are formed. (p. 8)

Given this emphasis on the analysis of constraints in shaping educational investments, the lack of attention in educational policy analysis about how preferences are formed constitutes a notable omission of the constraints that racial bias can place on educational investments by minoritized students.

THE DEVELOPMENT OF MEASURES OF STUDENT AND INSTITUTIONAL INTERCULTURAL EFFORT

The conceptual framework presented above makes clear that it is important to measure cultural constraints on college students' investments in education. Doing so can involve students or institutional actors (or "practitioners") as the unit of analysis. In this section, we discuss five strategies for assessing cultural constraints through measures of (a) student perceptions, feelings, and beliefs about cultural constraints; (b) student experiences of events and behaviors (positive or negative) through which institutional actors reduce or impose constraints; (c) students' self-reported behaviors to counter constraints; (d) practitioners' perceptions, feelings, and beliefs about the existence of cultural constraints on campus; and (e) practitioners' self-reported behaviors to reduce cultural constraints. The measures in the third category would most directly measure intercultural effort on the part of students (students' self-reported behaviors efforts to overcome constraints), and measures in the fifth category would most directly measure intercultural effort on the part of institutional actors. In contrast, the measures of perceptions, feelings, and beliefs of students or practitioners would provide a more indirect reading of intercultural effort by indicating the necessity of exerting effort.

Assessment in higher education is currently carried out largely through surveys of students. Many instruments exist to measure campus climate, according to Hurtado, Griffin, Arellano, and Cuellar (2008), who identified and reviewed more than 90 campus climate measures. These measure students' perceptions, beliefs, and experiences. Examples of the other categories of measures outlined above are less readily available, because higher education assessment has rarely relied on surveys of practitioners' perceptions, beliefs, feelings, or behaviors (with the possible exception of instructional behaviors in the classroom). However, some models from outside the field of higher education offer starting points for assessing practitioner effort to reduce cultural constraints.

The existing survey instruments reviewed in this section suggest approaches and indicators to develop complementary surveys of intercultural effort on the part of students and institutional actors in higher education. Although none specifically measures intercultural effort on the part of students or institutions, they illustrate the content relevant to intercultural effort that is missing from the current constructs of student effort and engagement. Their concepts and measures could be further tested, modified, and combined for the purpose of designing and validating surveys of intercultural effort. Due to the lack of available models along the measurement dimensions of the five categories that could be used to measure cultural constraints, the following review groups student-measures as "foundations for measures of student intercultural effort" and practitioner-unit measures as "foundations for measures of instituitonal intercultural effort."

Foundations for Measures of Student Intercultural Effort

The Diverse Democracy Project and the Diverse Learning Environments surveys, analyzed by Nuñez (2009) and Museus and Maramba (2011) provide measures of students' perceptions, beliefs, and feelings about institutional cultural constraints. The construct of sense of belonging is measured with indicators such as "I feel like a part of the community," "I feel isolated from campus," and "Language and appearance make it hard to fit in." Indicators such as "I have been singled out in class because of my race/ethnicity, gender, or sex" and "I have to change myself a lot" begin to isolate quantifiable behaviors and experiences indicating that students are exerting effort to counter cultural constraints.

Other measures of this type have also been developed. Barnett (2011) developed indicators of students' perceptions of acceptance, whether their own ("I feel accepted as a person by my instructors" and "I feel that my personal and family history is valued in class") or others' ("People of color are encouraged to contribute to the class discussion"). Gloria and Robinson Kurpius's (1996) Cultural Congruity Scale (CCS) measures students' perception of cultural fit between personal and university values (e.g., "I feel that I have to change myself to fit in at school," "I try not to show parts of me that are ethnically based"). Gloria, Castellanos, and Orozco's (2005) "Perceived Educational Barriers, Cultural Fit, Coping Responses, and Psychological Well Being of Latino Undergraduates" utilized two education subscales: Perceptions of Barriers to Withdrawing from College (POB-Withdraw) and Perceptions of Barriers to Staying in College (POB-Stay) in order to measure barriers to college completion for Latina students in higher education. For instance, Latina students were asked to indicate to what degree social issues may become reasons for college completion or withdrawal (e.g., "'If I were to withdraw from college, it would be because of not fitting in with others").

The University Environment Survey (UES) (Gloria & Robinson Kurpius,

1996) assesses racial and ethnic minority students' perceptions of their university's environment (e.g., "The university seems to value minority students"). In a similar vein, Nelson Laird and Niskode-Dossett's (2010) "How Gender and Race Moderate the Effect of Interactions across Difference on Student Perceptions of the Campus Environment" generated the Institutional Supportiveness Survey (ISS) and the Supportive Relationship Survey (SRS), which were tested across racial and gender groups for analyses. The ISS measures students' feelings of support from their institutions on academic and non-academic levels (e.g., "To what extent does your institution emphasize each of the following. . . . . Helping you cope with your non-academic responsibilities [work, family, etc.]"). The SRS assesses students' feelings of support from different campus groups such as peers, faculty, and administration (e.g., "Mark the box that best represents the quality of relationships with people [other students] at your institution," with responses ranging from "unfriendly, unsupportive, sense of alienation" to "friendly, supportive, sense of belonging"). Finally, Chavous (2005) generated a racial campus climate instrument assessing perceived intergroup interactions—drawn from Allport (1954)—both personal interactions and those of others, across individual and institutional levels.

At the faculty-classroom level, Valentine, Oliva, and Thomas (Thomas, 2004) developed the Classroom Dynamics Questionnaire (CDQ) after identifying limitations in the existing Adult Classroom Environment Scale (ACES) through focus groups with African American adult students. They concluded that the measurement items in the ACES were based on a "normative view of the world" that ignored issues of "safety and positionality that exist in the classroom," "power struggles that take place in language," and students' perceptions that "the learner is conceived monolithically and the dominant culture rules" (p. 43). To measure these dynamics, the CDQ includes items concerning the instructor's respect for students (e.g., "the teacher really listens when students are speaking"); the climate for dialogue and open conflict (e.g., "students feel comfortable disagreeing with one another"); and the sense of cohesiveness in the classroom, indicated by sharing, support, and affiliation among students (e.g., "students care about each other's learning progress") (p. 147). Similarly, the College Classroom Environment Scales (CCES, developed by Winston, Vahala, Nichols, & Gillis, 1994) seek to measure students' perceptions of professorial concern and of very competitive, hostile, or intimidating classroom experiences, which the developers term "inimical ambiance" (e.g., "Students feel uncomfortable talking with the professor in this class").

Osei-Kofi, Richards, and Smith (2004) suggest indicators of inclusive classrooms that assess, for example, whether "all students contribute to class discussions," "voices of dissent are silenced," "a diversity of voices, perspectives, and scholarship are represented in course content," and "faculty are

comfortable relinquishing their position of power and expertise" (pp. 63–64). Finally, in what might constitute indicators of institutional effort to address power dynamics, Tanaka (2002) recommends asking students if they have discussed meanings of cultural identity, power, and authority in their classes, critiqued what counts as history and knowledge, and discussed how power operates in race relations.

Reid and Radhakrishnan's (2003) campus climate measure includes the Racial Climate Scale (RCS), along with related measures of academic and general campus climate. The RCS consists of two subscales: the Racial Experiences (RE) subscale, assessing the degree of negative perceptions of racial climate (e.g., "I have experienced racial insensitivity from other students") and the University Perceptions subscale, measuring the degree to which students view the campus as racially inclusive (e.g., "The university has made a special effort to help racial and ethnic minority students feel like they belong on campus").

These preceding measures of students' perceptions and beliefs could be reworded to quantify how often students are experiencing racial bias or feeling marginalized by instructional or administrative practices. HERI's (2009) Diverse Learning Environments survey uses the following prompt for measuring such experiences: "Please indicate how often you have experienced the following forms of bias/harassment/discrimination while at *this* institution." Otherwise, our review did not uncover items asking students to estimate experiences of discrimination or bias in terms of their frequency. Such measures should be developed (in addition to the measures of perceptions, beliefs, and feelings) because they can be used to measure the specific places and practices through which students have such experiences and, therefore, to guide interventions to reduce discriminatory practices.

Several instruments, administered outside of higher education, quantify experiences of discrimination and could be modified. These are the Schedule of Racist Events Inventory (Landrine & Klonoff, 1996), The Brief Racism Scale (Harrell, 1997, as cited in Bynum, Burton, and Best, 2007), and the Cultural Mistrust Inventory (CMI) (Terrell & Terrell, 1981). These instruments measure the indirect impact of discrimination on individuals by assessing their experiences of racism and racial conflict. The Schedule of Racist Events Inventory assesses the prevalence of racism and its effects on the physical and mental health of African Americans. The Brief Racism Scale from the Racism and Life Experiences Scales (RaLES) is a condensed version of 10 scales measuring experiences and perceptions related to the impact of racism on respondents' lives (e.g., "Overall, how much do you think racism affects the lives of people of your same racial/ethnic group?"). The CMI (Terrell & Terrell, 1981) is an assessment of mistrust that African Americans feel toward the dominant White culture. The Perceived Ethnic Discrimination Questionnaire (PEDQ) (Contrada, Ashmore, Gary, Coups, Egeth, Sewell,

Ewell, Goyal, & Chasse, 2001) is a frequency measure of targeted, quantifiable acts of discrimination. Individuals are asked to indicate the frequency of events such as being referred to as an ethnic slur or treated unfairly based on ethnicity, over the past three months. The PEDQ consists of four subscales, termed Disvaluation, Avoidance, Verbal Rejection, and Threat Aggression.

Foundations of Measures of Institutional Intercultural Effort

Examples of surveys of practitioner beliefs about the existence of cultural constraints on their campus, their responsibility or agency to reduce cultural constraints, and the behaviors they engage in to reduce such constraints are not prominent, and none emerged through our review. Items from surveys used in other populations provide measures of intercultural sensitivity, intercultural adaptability, and discriminatory belief systems. These could be adapted to the higher education context and administered to practitioners to develop measures of institutional intercultural effort. The following measures focus on the individual's belief systems and adaptability to other cultures. Many of these measures of intercultural sensitivity and adaptability were generated to address the increasing focus on globalization within the higher education or corporate contexts. For example, the population focus is individuals completing a study abroad program or traveling abroad for business.

Intercultural Sensitivity. The Intercultural Sensitivity Inventory (ICSI) (Brislin, 2002) operationalizes the construct of "intercultural" between two cultural dimensions: individualistic and collectivistic. Intercultural sensitivity is assessed across three levels: the individual's understanding of his or her behavior when interacting in an individualistic or collectivistic culture, "open-mindedness" regarding cultural differences, and intercultural behavioral adaptability.

A second measure of intercultural sensitivity is the Intercultural Development Inventory (IDI) (Hammer, Bennet, & Wiseman, 2003). The IDI is based on the Developmental Model of Intercultural Sensitivity (DMIS) and is designed to assess patterns in an individual's behavior in order for him or her to gain further understanding about his or her orientation toward cultural differences. The IDI instrument is noteworthy because it assesses intercultural competencies across five dimensions: two ethnocentric orientations focusing on the centrality of an individual's own culture to his or her own reality (termed Denial/Defense and Minimization); and three ethnorelative orientations, assessing the placement of the individual's own culture within the context of other cultures (termed Acceptance/Adaptation, Reversal, and Encapsulated Marginality). The Denial/Defense subscale (DD) indicates how an individual's worldview simplifies and/or polarizes cultural differences. The Reversal subscale (R) is designed to assess the reaction to a reversal of the "us" and "them" polarization where "them" is deemed superior. The Minimization subscale (M) measures an orientation that supports commonality across

cultures. The Acceptance/Adaptation (AA) subscale indicates an orientation toward comprehension and accommodation across cultural differences. Lastly, the Encapsulated Marginality (EM) subscale assesses a worldview that integrates multicultural identity with confused cultural perspectives.

Wang, Davidson, Yakushko, Savoy, Tan, & Beier's (2002) Scale of Ethnocultural Empathy (SEE) measures the empathy felt toward individuals of racial or ethnic backgrounds different from one's own. The SEE consists of four factors: Empathetic Feeling and Expression (e.g., "When I hear people make racist jokes, I tell them I am offended even though they are not referring to my racial or ethnic group"), Empathetic Taking (e.g., "It is easy for me to understand what it would feel like to be a person of a racial or ethnic background other than my own"), Acceptance of Cultural Differences (e.g., "I feel irritated when people of different racial or ethnic backgrounds speak their language around me"), and Empathic Awareness (e.g., "I am aware of how society differentially treats racial or ethnic groups other than my own"). Lastly, the items of the Color-Blind Racial Attitudes Scale's (CoBRAS) (Neville, Lilly, Duran, Lee, & Browne, 2000) items (e.g., "White people in the U.S. have certain advantages because of the color of their skin"; "Racial problems in the U.S. are rare, isolated situations") provide measures of three constructs of racial consciousness, termed Unawareness of Racial Privilege, Institutional Discrimination, and Blatant Racial Issues.

Intercultural adaptability. The Cross-Cultural Adaptability Inventory (CCAI) (Kelley & Meyer, 1995) assesses the ability of individuals to adapt to any culture. The CCAI may be used to aid individuals in their understanding of their own intercultural strengths and weaknesses via analyses of the following characteristics: Emotional Resilience (ER), Flexibility/Openness (FO), Perceptual Acuity (PAC), and Personal Autonomy (PA). Stated goals for the utilization of the CCAI include helping individuals decide whether to work in a multinational company, study or work abroad, or promote cultural awareness in academia (e.g., in the classroom, student affairs, etc.).

A second assessment, the Cultural Intelligence Scale (CQS) (Cultural Intelligence Center, 2010), was designed to assess cultural intelligence (CQ) (Early & Ang, 2003) or the ability to function effectively in culturally diverse settings. The CQS consists of four dimensions of the theoretical construct of cultural intelligence: Metacognitive CQ (e.g., "I am conscious of the cultural knowledge I use when interacting with people from different cultural backgrounds."), Cognitive CQ (e.g., "I know the cultural values and religious beliefs of other cultures."), Motivational CQ ("I enjoy living in cultures that are unfamiliar to me."), and Behavioral CQ (e.g."I vary the rate of my speaking when a cross-cultural situation requires it.").

Discriminatory Belief Systems. Biernat and Crandall (1999), as well as Burkard, Medler, and Boticki (2001), offer comprehensive reviews of self-

report measures of racial prejudice. One measure positively assessed in both reviews is the Quick Discrimination Index (QDI) (Ponterotto, Potere, & Johansen, 2002). The QDI was designed to assess prejudicial belief systems directed toward racial minority groups and women. The index focuses on the cognitive and affective components implicit to prejudicial belief systems that drive discriminatory behaviors. The QDI consists of three subscales: Cognitive Racial Attitudes (e.g., "Overall, I think racial minorities in America complain too much about racial discrimination."), Affective Racial Attitudes (e.g., "I would feel O.K. about my son or daughter dating someone from a different race."), and Cognitive Gender Attitudes (e.g., "I think there is as much female violence toward men as there is male physical violence toward women."). A high score on the QDI is indicative of greater levels of awareness and sensitivity to racial diversity and gender equality.

Overall, this review demonstrates that indicators of intercultural effort have been conceptualized and are available for incorporation into instruments used to assess cultural practices as mediators of institutional effectiveness. Recommendations for the development of future indicators and instruments include the utilization of faculty, administrators, and staff as the units of analysis in addition to or in comparison with student units. Fundamentally, there is an absence of measures of "student effort" that include effort expended by the student at the intercultural level. Such measures are needed to assess institutional culture and effectiveness in serving minoritized and majority students.

Conclusion

A research agenda is needed that focuses on the development of student and practitioner "intercultural effort" measures, utilizing indicators similar to those described in this section. Without adequate measures, invalid inferences may be made at the research, institutional, and policy levels, regarding "student effort" and/or institutional effectiveness. This may be particularly detrimental to our understanding of the investments made by students who experience cultural incongruence or discrimination and to the adequacy of institutional and policy response.

Intercultural constraints on the college success of minoritized students are real, identifiable, and measurable. It is essential to measure these constraints in order to attend to and alleviate them. Otherwise understanding the problems facing higher education and identifying an appropriate range of solutions will be inadequate to address central problems facing higher education. Assessment instruments commonly used today may narrow perspectives on the institutional scope of responsibility because colleges will be looking at only part of the picture. Colleges may become complacent about efforts

toward institutional reforms because the assessment instrument allows them to overlook important problems. Colleges cannot see or address significant problems that are not measured.

Viewing student effort as a sign of institutional productivity is rooted in the assumption that students are not motivated to learn and that the college deserves credit for motivating them. Once the assumption of race-neutrality in measures of effort is abandoned, a measured lack of effort on the part of students can be viewed as stemming from intercultural and economic constraints rather than from lack of motivation. If we assume all students are motivated to learn and that academic ability is identically distributed among different racial-ethnic groups, then more attention will be given to the constraints placed on students by racially biased practices. The results cannot simply be informative as an assessment heuristic because they may, at the same time, be doing damage by narrowing our view of what matters. We have emphasized cultural constraints on student success and echoed Tanaka's (2002) call for institutional responsibility in reducing intercultural barriers. This emphasis does not negate the role and agency of individuals to define their own cultural trajectory and to alter the conditions of their own assistance (Tanaka, 2002). Like Osei-Kefi, Richards, and Smith (2004), we emphasize that improving effectiveness in student success "requires grounding our work in a historically specific understanding of America, higher education, and the experiences of our students" (p. 64).

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