Chapter 5
The Culturally Engaging Campus Environments (CECE) Model: A New Theory of Success Among Racially Diverse College Student Populations

Samuel D. Museus

Almost half of all college students who enter a four-year postsecondary institution will fail to complete a bachelor's degree within 6 years of entering higher education (National Center for Education Statistics [NCES] 2012). In addition, students of color face substantial racial and ethnic disparities in college persistence and degree attainment. Indeed, while 62 % of White students who begin college at a four-year institution complete a bachelor's degree within 6 years of matriculation, that figure is only 39, 40, and 50 % for American Indian and Alaskan Native, Black, and Latino students, respectively (NCES 2012). Although Asian Americans and Pacific Islanders (AAPIs) exhibit high levels of educational attainment in the aggregate, many Southeast Asian American and Pacific Islander ethnic groups within the larger AAPI racial category suffer from drastic racial and ethnic disparities in degree attainment as well. For example, Vietnamese (26 %), Hmong (14 %), Cambodian (13 %), and Laotian (12 %) Americans, as well as Chamorros (21 %), Native Hawaiians (17 %), Guamanians (13 %), Fijians (11 %), Tongans (11 %), Samoans (10 %), and Micronesians (4 %) all hold bachelor's degrees at rates lower than the national average of 28 % (Museus 2013a).

These low rates of degree attainment among college students in general, and the especially low rates of success[1] among populations of color in particular, have significant negative consequences for individual students and society at large (Baum et al. 2010). The negative individual ramifications that result from these low success rates, for example, include lower lifetime earnings and higher rates of poverty. Moreover, the negative consequences that accrue to larger society, due to these low

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[1] For the purposes of this chapter, I use "success" to denote persistence and degree completion. However, I acknowledge that success can be defined in other ways, including by learning and developmental outcomes. Therefore, the proposed model can be used to examine influences on learning and developmental outcomes as well.

S.D. Museus, Ph.D. (✉)
Morgridge College of Education, University of Denver,
1999 E. Evans Ave., Denver, CO 80208, USA
e-mail: Sam.Museus@du.edu

rates of success, include lower tax revenues, higher rates of incarceration, and lower rates of civic participation throughout society (Baum et al. 2010; Swail 2004). Given the aforementioned low rates of bachelor's degree attainment and the negative consequences that are associated with them, understanding how to maximize success among racially diverse college student populations[2] should be of paramount importance to postsecondary education researchers, policymakers, and practitioners.

The Need for New Tools and Lines of Inquiry into Success Among Diverse College Student Populations

Several higher education scholars have now called for new theoretical frameworks and assessment instruments that better reflect the experiences of racially diverse student populations or begun developing such tools and using them to pursue new lines of inquiry into college success (e.g., Dowd et al. 2011; Hurtado and Carter 1997; Museus and Quaye 2009; Olivas 2011; Tierney 1992, 1999). These calls and efforts to construct new tools and pursue fresh lines of scholarly inquiry around student success have, at least in part, emanated from increased attention given to the limitations of existing dominant theoretical perspectives of college success and the research that they have catalyzed. For example, one such limitation is the lack of explicit attention that traditional theories and the research that examines those theoretical perspectives give to the racial and cultural realities faced by populations of color in college (Dowd et al. 2011). The failure of these frameworks to adequately account for such racial and cultural realities can contribute to inaccurate assumptions that racial and cultural bias does not shape institutional environments, programs, and practices or ultimately impact the experiences and outcomes of racially diverse populations.

The aforementioned assumption is problematic, given the large and growing body of empirical research that illuminates the racial and cultural bias that students encounter on college campuses. Indeed, over the last two decades, a substantial amount of scholarship has examined the impact of institutional environments on the experiences and outcomes of racially diverse college student populations. This body of evidence has illuminated both the *types* of racial and cultural challenges faced by diverse undergraduates and their *effects* on those students' success in postsecondary education. I present three major themes in this body of research herein, which underscore racial hostility experienced by students of color, cultural challenges faced by these students, and the reality that these racial and cultural realities influence college outcomes.

First, a wide range of qualitative and quantitative empirical studies indicate that all students can encounter unwelcoming campus environments in college, but students of color more frequently report encountering hostile racial climates than their White counterparts (Ancis et al. 2000; Hurtado 1992; Harper and Hurtado 2007; Lewis

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[2] For the purposes of this chapter, the term "racially diverse student populations" does not refer only to students of color. Rather, I use the term to refer to all students, including White and students of color, and emphasize the racial diversity as a key characteristic of these populations.

et al. 2000; Nora and Cabrera 1996). Indeed, several qualitative studies illuminate the nature of the racism that students of color experience in college (Feagin 1992; Feagin et al. 1996; Lewis et al. 2000). Lewis et al. (2000), for example, interviewed 75 students of color at a predominantly White institution and found that those students often encountered racial hostility from their White peers.

In addition, a substantial body of quantitative research sheds light on the disproportionate frequency of college students of color encountering such racial hostility compared to their white peers (e.g., Allen 1992; Ancis et al. 2000; Hurtado 1992; Nora and Cabrera 1996; Rankin and Reason 2005). For example, Ancis et al. (2000) surveyed 578 students at one predominantly White institution and found that Black students reported significantly more racial conflict, differential treatment, and pressure from racial stereotypes than their White peers. Nora and Cabrera conducted a quantitative analysis of 831 students at a single predominantly White institution and found that students of color reported more negative campus climates, higher levels of discrimination from faculty, and greater insensitivity in the classroom than their White peers. Similarly, Rankin and Reason surveyed 7,347 students across 10 campuses and found that students of color in their study perceived their campuses to be more racist and less tolerant than their White counterparts.

Second, several existing qualitative investigations illuminate the reality that, while college students in general must go through an adjustment process when they enter higher education, undergraduates of color often report encountering significant cultural challenges throughout this adjustment process (Kuh and Love 2000; Lewis et al. 2000; Museus 2008a; Museus and Quaye 2009). Lewis et al. (2000), for example, found that their participants of color encountered contradictory pressures to represent their respective racial or ethnic groups while simultaneously experiencing pressure to assimilate into the mainstream cultures of their respective campuses. Similarly, Museus and Quaye (2009) interviewed 30 students of color and concluded that they experienced cultural dissonance – or tension that results from incongruence between their cultural meaning-making system and new cultural information that they encounter in their environment (Museus 2008a) – which can cause these students to disengage from their campus cultures and inversely impact their success in college.

Finally, existing qualitative and quantitative research underscores the fact that campus racial climates and cultures influence the adjustment, engagement, and success of racially diverse populations in profound ways (Cabrera et al. 1999; Guiffrida 2003; Guiffrida et al. 2012; Hurtado and Carter 1997; Museus 2007, 2008a, b, 2011a, b; Museus et al. 2008, 2012; Museus and Quaye 2009; Nora and Cabrera 1996). Indeed, scholars have qualitatively underscored the ways in which campus cultures and subcultures shape racially diverse students' experiences, connections to their institutions, and eventual success in complex ways (González 2003; Guiffrida 2003; Kiang 2002, 2009; Lewis et al. 2000; Museus 2008b; Museus et al. 2012; Museus and Quaye 2009). For instance, González used a concept-modeling approach to conduct an in-depth qualitative analysis of two Chicano college students at a predominantly White institution and found that these students encountered significant challenges in the social (e.g., interactions, political power, group

process, and language spoken on campus), physical (e.g., architecture, campus artwork, and other physical symbols), and epistemological (e.g., the knowledge that exists and is exchanged within the campus) aspects of the campus culture. Alternatively, researchers have qualitatively illuminated the ways in which ethnic subcultures on campus can work to provide safe havens within the larger campus context and facilitate racially diverse student populations' connections to their institutions and success by engaging their cultural backgrounds, validating their cultural identities, and responding to the needs of their cultural communities (González 2003; Guiffrida 2003; Kiang 2002, 2009; Museus 2008b; Museus et al. 2012; Museus and Quaye 2009).

Similarly, postsecondary education scholars have quantitatively analyzed both single-institution and nationally representative samples and found campus racial climates and cultural influences to be significant predictors of college adjustment, persistence, and degree completion (Cabrera et al. 1999; Hurtado and Carter 1997; Museus et al. 2008; Museus and Maramba 2011; Nora and Cabrera 1996). Museus et al., for example, conducted a longitudinal analysis of a nationally representative sample of 8,492 first-time, full-time four-year college students and concluded that perceptions of the campus climate influenced those students' academic and social involvement and eventual degree completion outcomes, although the nature of those relationships varied across racial subpopulations within their larger national sample.

In sum, a substantial body of existing empirical research offers compelling evidence that the racial and cultural realities within college and university environments shape the experiences and outcomes of racially diverse student populations. This body of scholarship also reinforces the importance of acknowledging and addressing the aforementioned limitation of traditional college success theories and the research examining them, which revolves around those perspectives' tendency to give insufficient attention to these racial and cultural contexts as critical factors in explanations of student success. As Dowd et al. (2011) have pointed out, the reliance on such traditional theoretical models and assessment instruments, without meaningful consideration of the racial and cultural realities discussed above, can mislead policymakers and educators into thinking that they are developing comprehensive understandings of college success, when they might only be acquiring a partial picture of reality. And, a failure to consider the racial and cultural realities discussed above can have harmful consequences for historically underrepresented college student populations, as it can lead to the crafting of educational policies and programs that fail to take into account some of the most salient influences on the experiences and outcomes of racially diverse student populations in college.

Purpose and Outline of the Current Chapter

In light of the realities discussed above, scholars have called for the development of more racially and culturally responsive theoretical models and assessment tools that can help educators better understand success among diverse populations in higher

education (Dowd et al. 2011; Museus and Quaye 2009; Tanaka 2002). Moreover, they have asserted that such efforts should be pursued with a sense of urgency so that institutions can reverse the effects of institutionalized racial and cultural bias that can adversely affect the experiences and outcomes of diverse student populations (Dowd et al. 2011). The current chapter was conceptualized and composed with this sense of urgency in mind and it has two overarching purposes. First, the current discussion is intended to provide a comprehensive analysis of existing theories and perspectives that are designed to explain college student success. Second, the current chapter is aimed at presenting a new Culturally Engaging Campus Environments (CECE) model of college success among diverse college student populations, which can potentially provide the foundation for a new body of future research and discourse on student success in postsecondary education.

In the following section, I introduce Tinto's (1975, 1987, 1993) theory of student departure, which has dominated discourse on college student success for over three decades. I both highlight the contributions of Tinto's theory and delineate four major critiques of his model, which underscore its limitations in explaining success among racially diverse student populations (Guiffrida 2006; Hurtado and Carter 1997; Kuh and Love 2000; Museus et al. 2008; Museus and Quaye 2009; Nora and Cabrera 1996; Rendón 1994; Rendón et al. 2000; Swail et al. 2003; Tierney 1992, 1999). I also briefly discuss two other traditional perspectives that have been used to analyze and understand the role of college student behaviors on their success outcomes – namely, the concepts of student involvement and engagement (Astin 1993, 1999; Kuh et al. 2005). In doing so, I argue that these college student involvement and engagement perspectives both have made substantial contributions to existing knowledge regarding the college experience and share some of the noteworthy limitations of Tinto's theory in their application to diverse populations.

Next, I provide an overview of some culturally relevant alternative perspectives of success among diverse student populations that have been derived from the voices of racially diverse students and proposed over the last two decades. I highlight how these perspectives have advanced current levels of understanding regarding the success of diverse students but also underscore the reality that researchers have not yet widely adopted, examined, and (in)validated any of these perspectives in higher education scholarship. In doing so, I argue that these alternative frameworks, while making significant contributions to the knowledgebase and giving more sufficient attention the racial and cultural realities faced by diverse populations, fall short of accomplishing the three following tasks: (1) addressing all of the shortcomings of traditional perspectives of college student success, (2) offering a comprehensive model derived from the substantial body of literature on diverse college student populations, and (3) providing a model comprised of a set of easily quantifiable and testable hypotheses. I assert that the development of a new model that does accomplish these three tasks is warranted to catalyze a new line of research and discourse that can help advance knowledge about campus environments and success among racially diverse student populations in postsecondary education.

Then, I propose a new CECE Framework of success among racially diverse colleges' student populations. The CECE model takes into account the limitations of

traditional success perspectives, is derived from the voices of racially diverse populations, and consists of a set of interconnected hypotheses that can be quantified, tested, and (in)validated by higher education scholars. I conclude the chapter with a discussion of the implications of this new theory of college success for future research and practice in postsecondary education.

Tinto's Theory of College Student Success

Tinto's (1975, 1987, 1993) theory of college student departure is the most widely cited theory of college student persistence and degree completion. His theory posits that students enter higher education with an initial level of commitment to their goals and their institutions. Students' levels of commitment determine their degree of integration into the academic and social subsystems of their respective campuses. In turn, students' levels of integration into the academic and social subsystems of their campuses shape their subsequent commitments to their goals and their institution. These subsequent commitments, in turn, determine students' likelihood of success. While much of the research testing Tinto's integration theory is focused on analyzing whether academic and social integration predict college persistence and degree completion (see Braxton 2000; Braxton et al. 1997), the theory is founded on a set of important cultural foundations that were developed in the field of anthropology.

Tinto's (1987, 1993) integration theory is partly based on Van Gennep's (1960) stages of cultural transition. Van Gennep asserted that individuals go through three stages of transition from one status to another within a particular culture. First, individuals go through *separation*, or detachment from their former selves. Second, these individuals occupy a position of *liminality*, which denotes the transition period from the first to the second status. Finally, the stage of *incorporation* includes the adoption of the values and norms of the newly acquired status. Adopting this conceptual foundation, Tinto (1993) asserted that students must "physically as well as socially dissociate from the communities of the past" to fully integrate into academic life and succeed (p. 96). Thus, the underlying conceptual foundations of Tinto's theory are based on an assumption that students who fail to sever ties with their cultures and communities of origin and assimilate into the cultures of their campuses are less likely to persist and complete college (Hurtado and Carter 1997; Kuh and Love 2000; Tierney 1992, 1999).

Tinto's (1975, 1987, 1993) integration theory has provided the foundation for a substantial body of empirical research and dominated research on college success for over 30 years. Indeed, Braxton and Hirschy (2005) asserted that the theory has reached near paradigmatic status. While Tinto's theory has certainly helped advance knowledge of the student persistence process in meaningful ways, scholars have also underscored several critiques and limitations of the theory, particularly in its application to the experiences and outcomes of racially diverse student populations (Guiffrida 2006; Hurtado and Carter 1997; Rendón et al.

2000; Tierney 1992, 1999), which I discuss in more detail in the next section. Despite these critiques, Tinto's theory continues to shape discourse around college student success.

Before moving forward, it is important to note that the continuing influence of Tinto's (1987, 1993) theory on college success discourse could be due, at least in part, to the fact that his model was one of the earliest published theories on college success and the heavy reliance on inter-citation in the field of higher education (Bensimon 2007). Indeed, the early presentation of Tinto's theory (1975, 1987) and the existence of the substantial body of subsequent research that examines it, coupled with the fact that it is often viewed as the theoretical foundation upon which current and future research on persistence and degree completion should build, might contribute to the tendency of higher education researchers to focus on his theory by critiquing and revising it, rather than establishing alternative, independent, empirically grounded, and testable theoretical models. The current chapter is based on the notion that, to advance college success theory and research to a new evolutionary phase, it is imperative that higher education scholars create and examine new theoretical models that are both grounded in empirical literature on diverse college students and can themselves constitute the underlying foundation for new bodies of future research on success among racially diverse student populations in higher education.

Four Critiques of Tinto's Theory of College Student Success

At least four major critiques of Tinto's (1975, 1987, 1993) theory have been discussed in existing literature. The *cultural foundations critique* refers to what scholars have noted as the culturally biased foundations of Tinto's integration theory. The *self-determination critique* focuses on the limitations of the self-deterministic nature of the theory. The *integration viability critique* underscores the questionable validity of the concepts of academic and social integration as viable predictors of college student success outcomes. Finally, the *psychological dimension critique* highlights the fact that much of the empirical research examining Tinto's theory does not account for psychological dimensions of students' sense of connection to their institutions. It is important to note that these four critiques are not intended to be an exhaustive list and are not necessarily mutually exclusive (i.e., that they overlap with one another).

It is also important to clarify that the purpose of this review of the limitations of Tinto's (1975, 1987, 1993) integration theory is not done to discount the value of his framework. Many would argue that understandings of student success within the field of higher education would not be as advanced as they are today without this theory and the work that it has catalyzed. Rather, this review of the critiques of Tinto's theory is carried out to offer a useful way to categorize and understand the different critiques of the integration theory so that readers can comprehend how they informed the model that is proposed later in this chapter.

Cultural Foundations Critique

First, scholars have noted that the cultural foundations of Tinto's (1975, 1987, 1993) theory are culturally biased and disproportionately disadvantage students of color (Attinasi 1989; Rendón et al. 2000; Tierney 1992, 1999). For example, it has been over 20 years since Tierney (1992) noted major concerns with regard to the cultural foundations of Tinto's theory and their application to understanding college student success. Tierney asserted that, given that students of color are more likely to come from cultures and communities that are markedly different from those found on their college campuses, expecting undergraduates of color to sever ties with their cultural heritages places an unfair burden on these students to dissociate from communities of the past that are important in their lives and assimilate into the cultures of predominantly White institutions. Tierney (1992) called for new theoretical perspectives that deviate from the integrationist perspective and "conceive of universities as multicultural entities where difference is highlighted and celebrated" (p. 604). Since Tierney offered this appraisal, the cultural foundations critique has attracted much attention in the higher education literature.

In addition, the cultural foundations critique has provided important groundwork for higher education researchers who have made efforts to reconceptualize the relationship between campus cultures and students of color (e.g., Dowd et al. 2011; Hurtado and Carter 1997; Kuh and Love 2000; Museus 2011b; Museus and Quaye 2009; Rendón 1994; Rendón et al. 2000; Tierney 1999). In contrast to framing cultures of origin as something from which students must detach and conceptualizing postsecondary institutions as having cultures into which students must assimilate, these scholars have provided alternative perspectives that both take into account the value in students' cultural backgrounds and shed light on the more complex ways that campus cultures interact with students' cultures of origin to mutually shape their experiences and outcomes (Kuh and Love 2000; Museus and Quaye 2009; Rendón 1994; Rendón et al. 2000). Nevertheless, as I discuss in more depth below, despite the emergence of these perspectives, what continues to be missing is a holistic, easily quantifiable, and testable explanatory model that provides a more balanced view regarding how students' cultures of immersion and cultures of origin interact to mutually shape their college experiences.

Self-Determination Critique

Second, closely related to the culturally biased foundations critique is the self-determination critique of Tinto's theory. Specifically, scholars note that Tinto's theory is self-deterministic in that it overemphasizes students' roles in succeeding in college, without adequately acknowledging the responsibility of institutions to foster these students' success (Bensimon 2006; Rendón et al. 2000). Indeed, such perspectives are problematic because they can function to blame underserved students (e.g., low-income students and students of color), who are less likely to

possess the capital or have access to support than their peers, for their struggles by attributing their failures to their individual behaviors and not acknowledging how their institutional environments might also hinder their progress toward positive educational outcomes (Valencia 1997). This is a critical critique of Tinto's integration theory, given that existing evidence suggests that the ways that institutions structure campus environments and college educators approach their work can and do, in fact, play a role in shaping the failure or success of their undergraduates (Bensimon 2006; Guiffrida 2003; Jayakumar and Museus 2012; Museus 2011b; Museus and Neville 2012; Museus and Ravello 2010).

Indeed, scholars have conducted qualitative inquiries that illuminate *how* postsecondary institutions and institutional agents (e.g., college faculty and staff) can and do foster success among racially diverse student populations (Guiffrida 2003; Museus and Neville 2012; Museus and Quaye 2009; Rendón 1994; Rendón et al. 2000; Tierney 1999). Museus and Neville, for example, conducted a qualitative examination of 60 undergraduates of color across four predominantly White institutions and concluded that institutional agents who contributed to the success of these students shared common ground with participants, incorporated a human element into participants' educational experiences, provided participants with holistic support, and espoused proactive philosophies in their approach to serving these undergraduates. This body of research has only begun to unpack how specific types of environments and educators' approaches to delivering programs and services can and do promote positive outcomes among racially diverse undergraduate populations, and more empirical research is warranted to better understand these processes. Moreover, this research is primarily qualitative in nature and examines small samples, and quantitative research that tests the impact of these types of environments and approaches to delivering educational programs and services on success among larger populations would help fill an important persisting void in the scholarship on success among diverse student populations in college.

Integration Viability Critique

Third, the integration viability critique refers to researchers' questioning of the viability of both the academic and social integration constructs as predictors of success (Braxton and Lien 2000; Braxton et al. 1997; Hurtado and Carter 1997; Swail et al. 2003). For example, comprehensive reviews of existing literature have concluded that empirical support for the salience of academic integration in predicting college persistence is modest (Braxton and Lien 2000; Braxton et al. 1997). Similarly, extensive reviews of extant empirical research examining the viability of the social integration construct suggest that the relevance of social integration is questionable on commuter campuses (Swail et al. 2003). In addition, existing empirical evidence of the predictive validity of both the academic and social integration constructs on the persistence and degree completion of two-year college students is mixed (see Crisp 2010).

Moreover, it is important to acknowledge that most measurements of social integration have failed to include modes of social participation that are common among students of color (e.g., participation in ethnic student organization and cultural activities) (Hurtado 1994). As a result, researchers have operationalized the social integration construct in ways that measure behaviors that are more common among White college students and more accurately capture White undergraduates' experiences than their peers of color (Hurtado and Carter 1997). This trend can be considered problematic, because it can lead to college educators structuring environments, programs, and practices around evidence that is not based on the realities of historically underrepresented college student populations.

It is also important to note that the dichotomization of academic and social connections that students make with their institutions might be artificial and unwarranted in certain higher education contexts. For example, educators can and do sometimes develop academic programs, spaces, projects, and activities that simultaneously foster both academic and social connections between students and their institutions (Museus 2011b; Museus et al. 2012; Tinto 1998). In doing so, they blur the lines between the academic and social spheres of college life. In fact, it has been argued that activities that include academic and social elements, when coupled with cultural relevance and responsiveness, can be powerful tools in simultaneously strengthening students' academic and social connections to their institutions while allowing them to maintain important ties with their cultural communities (Museus 2011b). Moreover, it is important to note that, for students who spend most of their time on campus in class, the "academic" connections that are made in the classroom might be the lens through which they assess their sense of "social" cohesion or membership on campus. Given these realities, rather than focusing on two distinct and dichotomous forms of integration, it might be more useful for researchers to focus on the quality and quantity of students' connections to individual and collective agents on their campuses or their overall connectedness to their campus cultures, regardless of whether they are academic, social, or both academic and social in nature (e.g., Hurtado and Carter 1997; Kuh and Love 2000; Museus and Quaye 2009).

Psychological Dimension Critique

The fourth and final critique of Tinto's theory presented herein is the psychological dimension critique. Hurtado and Carter (1997) underscore the failure of much of the research that is focused on examining Tinto's theory to account for the psychological dimension of students' connections to their institutions. They note that, in the first application of the concept of integration to understand college student success, Spady (1971) discussed the importance of *perceived* social integration and that this construct "encompassed students' subjective sense of belonging and 'fitting in' on campus" (Hurtado and Carter 1997, p. 325). Despite this original

application of the concept of integration, the psychological dimension of students' connectedness to their institutions has been lost in the vast majority of research examining Tinto's theory (for review, see Braxton et al. 1997). Indeed, researchers testing Tinto's (1975, 1987, 1993) model have often relied on behavioral measurements of academic and social integration (Hurtado and Carter 1997). This overreliance on academic and social behaviors can be problematic because students from different racial groups can experience the same activities within their campus environments, and their involvement in these activities, in very different ways (Harper and Hurtado 2007). Therefore, it is important to note that students' perceptions of the quality of their connections with the cultures of their respective campuses might be just as important as considering the quantity of these linkages (Hurtado and Carter 1997; Museus and Quaye 2009). Yet, because empirical research that examines Tinto's theory has not typically incorporated a psychological dimension or an element of quality into measurements of students' connections to their institutions, it has failed to generate a sufficient understanding regarding how various *types* of environments, curricula, programs, and practices affect success among diverse populations.

A Word on Other Traditional Frameworks of College Success

It is important to acknowledge that, over the past two decades, additional perspectives have been proposed to explain behaviors that facilitate college success among the general college student population and garnered a significant amount of attention in the higher education scholarly arena (Astin 1984, 1999; Kuh et al. 2005). For example, Astin (1984, 1999) has offered the concept of college student involvement, which highlights the importance of the quality and quantity of students' involvement in college in predicting educational outcomes. According to Astin's theory, college students' involvement is associated with higher levels of satisfaction with the college experience, persistence, and completion. He argues that students are at the center of the learning process, and postsecondary educators can enhance their learning and success by increasing their involvement in college activities and opportunities. Specifically, this theory of involvement suggests that experiences in college, such as interaction with faculty members and membership in student groups, are associated with learning and success outcomes.

In addition, the concept of student engagement has been offered to explain the impact of students' experiences in college on their learning and success outcomes (Kuh et al. 2005). And, a growing body of empirical research has examined the impact of engagement in college on those educational outcomes. The concept of student engagement suggests that it is high-impact practices that promote students' participation in educationally purposeful activities and enhance those students' levels of learning and likelihood of success in college. Kuh et al. (2005) have provided a framework to understand the kinds of high-impact practices that facilitate

educationally purposeful student engagement. Specifically, they delineated the following types of educationally purposeful engagement (NSSE 2005):

1. *Level of academic challenge* includes the level of students' engagement in academically rigorous activity, including studying, paper composition, and the analysis, synthesis, and application of ideas to meet the expectations of their faculty.
2. *Active and collaborative learning* includes active engagement in class discussions and presentations, studying and working on projects with peers inside and outside of class, service-learning opportunities, and academic discussions outside of the classroom.
3. *Student-faculty interaction* emphasizes interaction with faculty around academics, and it includes discussion of ideas from courses, discussion about career plans, and working on committees and projects with faculty.
4. *Enriching educational experiences* includes engagement in cross-cultural interaction, foreign language learning, student organizations, community service work, internships, learning communities, and international (e.g., study abroad) opportunities.
5. *Supportive campus environment* includes access and utilization of academic and social support and the quality of relationships with students, faculty, administrators, and staff.

Similar to Tinto's (1975, 1993) theory, these concepts of involvement and engagement have provided a valuable foundation for a substantial body of research and discourse on college student success. In doing so, they have advanced current levels of understanding regarding the ways in which institutions of higher education can facilitate success among their students by promoting various types of activities on campus that lead to positive educational outcomes. These perspectives, however, also share important limitations with Tinto's theory.

For example, the concepts of involvement and engagement, as well as the empirical research that employs and analyzes them, have most frequently been examined by using quantitative measurements of college students' behaviors (e.g., the frequency with which students engage in certain types of activities). Consequently, this body of research does not include a sufficient consideration of racial and cultural context (e.g., the nature of the campus cultures within which students' involvement or engagement behaviors occur) in its explanations of student success and, therefore, does not sufficiently reflect the racial and cultural realities faced by students of color in postsecondary education (Dowd et al. 2011). Given that the significant body of empirical research discussed above demonstrates that racial and cultural contexts are critical in shaping the experiences and outcomes of diverse student populations, ignoring such realities and adopting de-racialized or a-cultural perspectives of undergraduate success could be considered culturally biased in and of itself. Indeed, Tanaka (2002) underscores the limitations and potential negative consequences of utilizing de-racialized and a-cultural frameworks that focus on measuring student behavior because such perspectives 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)

Therefore, it is important that researchers generate perspectives that explicitly take these realities into account (Dowd et al. 2011).

Second, similar to Tinto's (1987, 1993) integration theory, the concepts of student involvement and engagement focus on underscoring the importance of the availability of specific types of activities and fall short of delineating *how* institutions can and should structure environments, programs, and practices maximize success among diverse populations most effectively. When shifting this institutional responsibility to the foreground, several questions abound, such as what makes active and collaborative learning activities effective? Or, what kinds of support are most useful in efforts to foster success among diverse populations? Thus, in disproportionately focusing on students' behaviors, these traditional perspectives might not sufficiently emphasize the responsibility of postsecondary institutions to construct and maintain the types of environments that promote success among their racially diverse student populations or help generate sufficient understandings regarding how campuses can create and perpetuate such environments (Rendón et al. 2000). Thus, new frameworks that can provide a foundation for examining and understanding how postsecondary institutions and educators working within them can construct particular types of environments to enhance the connections between racially diverse populations and their respective institutions are warranted.

Finally, as mentioned, it has been argued that existing empirical research that examines Tinto's (1987, 1993) integration theory does not shed sufficient light on the psychological components of college students' connections to their respective institutions (Hurtado and Carter 1997). Similarly, it could be argued that typical analyses of student involvement and engagement via measuring student behaviors also insufficiently account for the subjective psychological aspects of students' experiences participating in various types of activities in college. For example, the concept of student engagement implies that frequency of faculty-student interactions will enrich the college experience and facilitate success. Of course, however, if those frequent interactions consistently send signals to students that their cultural identities are devalued, they are second-class citizens, or the faculty member does not care about their success, such experiences might not have a positive influence on the college experience or success at all. As such, frameworks that consider the qualitative aspects of the environments in which students are immersed and activities in which they participate are warranted.

Again, the intent here is not to discount the importance of this extensive body of higher education theory and research. On the contrary, the scholarly field of higher education is much more advanced than it was two decades ago as a result of the

involvement and engagement perspectives and the bodies of scholarship that they have catalyzed. Rather, the point of this discussion is to underscore the reality that, like all theoretical perspectives and conceptual frameworks, the involvement and engagement perspectives have limitations. And, these limitations reinforce the importance of the development and testing of more culturally responsive models that sufficiently incorporate current levels of understanding regarding the role of cultural context, reflect the responsibility of institutions, and acknowledge the psychological dimensions of students' experiences in their explanations of college success.

Culturally Relevant Frameworks of Success Among Racially Diverse Student Populations

The aforementioned critiques of Tinto's (1987, 1993) theory have catalyzed a growing body of literature on alternative frameworks for understanding the success of racially diverse college student populations (e.g., Cabrera et al. 1990, 1992b; Down et al. 2011; Guiffrida 2006; Hurtado et al. 2012; Hurtado and Carter 1997; Kuh and Love 2000; Museus 2011b; Museus et al. 2008; Museus and Quaye 2009; Nora and Cabrera 1996; Rendón 1994; Rendón et al. 2000; Tierney 1992, 1999). These alternative frameworks can be easily separated into three categories. First, a number of scholars have offered *revisions of Tinto's theory* (e.g., Cabrera et al. 1990, 1992b, 1999; Museus 2010; Museus et al. 2008; Nora and Cabrera 1996; Swail et al. 2003). Second, researchers have offered *conceptual divergences from Tinto's theory* that shed additional light on the factors that promote college persistence and completion, but do not necessarily constitute alternative holistic frameworks for understanding success among racially diverse college student populations (e.g., Hurtado and Carter 1997; Museus 2011b; Museus et al. 2012; Rendón et al. 2000; Tierney 1992, 1999). Third, higher education scholars have proposed *new alternative perspectives* that are independent of Tinto's theory to better understand the persistence process (e.g., Kuh and Love 2000; Museus and Quaye 2009; Rendón 1994). These three types of frameworks and their contributions and limitations are delineated in this section.

Model Revisions

As early as the 1990, higher education scholars began constructing and testing revised versions of the Tinto model (Cabrera et al. 1990, 1992b, 1999; Guiffrida 2006; Museus et al. 2008; Nora and Cabrera 1996; Swail et al. 2003). Nora and Cabrera (1996), for example, developed a model that incorporated the concepts of family influences and racial prejudice and discrimination, in addition to academic and social integration, to explain persistence. They tested the model using a sample of 831 students from a single four-year institution and concluded that students'

maintenance of connections to their home cultures were important in their success, and experienced prejudice and discrimination exhibited an indirect effect on persistence. Such revised models have made critical contributions to the knowledgebase by addressing some of the limitations of Tinto's theory and highlighting the importance of considering environmental and other important factors in persistence processes.

Most of these revisions address some limitations of Tinto's (1975, 1987, 1993) theory, but do not holistically rectify all of the four aforementioned critiques. For example, Nora and Cabrera (1996) addressed the psychological dimension critique by measuring students' perceptions of the quality of their interactions with the academic and social subsystems of campus, rather than frequency of students' behaviors. It could be argued, however, that their model does not completely address the culturally biased foundations, self-determinism, and integration viability critiques of Tinto's theory. That is, while Nora and Cabrera's model brings attention to the role of family influences and institutional environments in college success, it still relies on the concept of integration and falls short of invoking the wide range of literature on racially diverse college student populations to offer more comprehensive explanations of the ways in which campuses can and do construct environments that positively and negatively shape the experiences and outcomes of students of color. The fact that these revisions fall short of sufficiently addressing the culturally biased foundations and integration viability critiques could be due to the fact that most of these models were developed at a time when scholars were just beginning to critique Tinto's integration theory and the empirical research illuminating the voices of students of color was still in its infancy.

While these revisions of Tinto's model have made important contributions to the knowledgebase, insofar as it is deemed important to address all of the major critiques of Tinto's (1987, 1993) theory, it might be more desirable to generate new frameworks of success that are independent from the integration model. Indeed, in the context of identity development theory, McEwen et al. (1990) have argued that revising foundational theories that are based on values and assumptions of European Americans to fit the experiences of students of color might be inappropriate and it may be more desirable to create new independent theories instead. Applying this logic to theories explaining the success of racially diverse populations, in order to address the culturally biased foundations and integration viability critiques of Tinto's integration theory in more comprehensive and effective ways, new theoretical frameworks that take into account the experiences and voices of people of color might be necessary.

Conceptual Divergences

In contrast to the aforementioned revisions of Tinto's (1987, 1993) theory, which build on his integration model, scholars have offered new concepts that were derived from the experiences of students of color, diverge from Tinto's model, and shed

additional light on the success of students of color (e.g., Dowd et al. 2011; Hurtado and Carter 1997; Museus 2011b; Rendón et al. 2000; Tierney 1992, 1999). Some of these researchers who have diverged from Tinto's model have borrowed concepts from outside of the field of higher education and applied them to generate alternative ways of understanding the experiences and outcomes of undergraduates of color. For example, Tierney (1999) applied Deyhle's (1995) concept of *cultural integrity* to students of color in college to advocate for institutions to affirm their cultural backgrounds and identities through programs and practices that engage those backgrounds and identities in positive ways (Tierney 1999). Similarly, building on the research of Bollen and Hoyle (1990) in psychology and sociology, Hurtado and Carter (1997) applied the concept of *sense of belonging* (i.e., students' overall perception of social cohesion within the campus environment) to better understand the experiences and outcomes of students of color. Rendón et al. (2000) presented the concept of *bicultural socialization* to highlight that students can learn how to effectively navigate multiple cultures (e.g., campus and home cultures) simultaneously. Museus (2011b) presented the concept of *cultural integration*, which is distinct from Tinto's (1975, 1987, 1993) concepts of academic and social integration and which he defined as the incorporation of all three major aspects (i.e., academic, social, and cultural) of students' lives into specific academic programs, courses, spaces, and activities. Finally, Tanaka (2002) and Dowd et al. (2011) have proposed *intercultural effort* as a concept that can provide the foundation for understanding how institutions of higher education and individual students invest effort needed to counter the negative pressures experienced by racially marginalized groups in college. And, existing research offers evidence that many of these new concepts might help explain the success of students of color (Berryhill and Bee 2007; Deyhle 1995; Harper and Quaye 2007; Hausmann et al. 2007; Helm et al. 1998; Johnson et al. 2007; Museus 2008a; Museus and Maramba 2011; Museus and Quaye 2009; Tierney 1992).

These conceptual divergences from Tinto's theory and the research that examines them have made significant contributions to current levels of understanding regarding the experiences and outcomes of college students of color. These divergent concepts, however, also have noteworthy limitations, such as the fact that they do not constitute holistic models that explain the process by which campus environments and college educators shape students' experiences and outcomes. For example, while Tierney's (1992) initial critique of the integration perspective addresses many of the limitations of Tinto's theory, Braxton et al. (1997) note that Tierney fell short of articulating a more valid explanation of persistence processes among students of color. Tierney's (1999) later work and introduction of the concept of cultural integrity provided an alternative lens through which to view the relationship between institutions and their students, but again fell short of articulating a more holistic explanatory framework for examining and understanding this relationship. Similarly, while Hurtado and Carter's (1997) sense of belonging construct addresses the integration viability critique by using a different conceptualization of connectedness to institutions (i.e., overall sense of cohesion), responds to the psychological dimension critiques of Tinto's theory by measuring perceptions of that cohesion,

and advances existing understandings of success among undergraduates of color, it does not constitute a comprehensive theoretical model that incorporates the extensive body of literature on diverse populations and the sense of belonging concept into a set of interrelated hypotheses that attempt to explain success among racially diverse student bodies.

Holistic Alternative Perspectives

A few researchers have attempted to generate new holistic frameworks of success among diverse populations that are independent of Tinto's theory and explain the student persistence and completion process (e.g., Baird 2000; Kuh and Love 2000; Museus and Quaye 2009; Rendón 1994). Kuh and Love (2000), for example, offered a *cultural perspective* of student departure consisting of eight culturally based propositions that help explain minority student persistence. They posited that the level of incongruence between students' precollege cultures and dominant campus cultures is negatively related to persistence, and students who experience a high level of distance between those two cultures must either acclimate to the dominant culture of their campus or become immersed in one or more subcultures to successfully find membership in and persist through college. They also posited that, when those subcultures value academic achievement, they are more conducive to the success of their members. Museus and Quaye (2009) subsequently analyzed Kuh and Love's cultural perspective, existing literature, and the voices of 30 students of color to confirm, revise, and build upon various elements of the aforementioned cultural perspective. The result of this analysis was a refined *intercultural perspective* that is derived from the voices and grounded in cultural realities of students of color. For example, Museus and Quaye's intercultural perspective suggests that it is extreme *cultural dissonance* – tension resulting from incongruence between students' cultural knowledge and the new cultural information that they encounter – that is inversely related to success. They also noted that, while Kuh and Love focused on the importance of connecting with subcultures that value achievement, connections to both collective and individual agents that value achievement and validate students' cultural backgrounds can facilitate students' success.

These new alternative and more holistic perspectives of success among racially diverse college student populations provide valuable alternatives to Tinto's model. However, they also have important limitations. Specifically, these more holistic alternative perspectives either do not take into account the extensive body of literature on how campus cultures and cultures of origin interact to mutually shape the outcomes of racially diverse populations (e.g., Baird 2000) or do not offer a set of easily quantifiable constructs and propositions that can be tested and (in)validated (e.g., Kuh and Love 2000; Museus and Quaye 2009).

For instance, Museus and Quaye's (2009) intercultural perspective addresses each of the four major critiques of Tinto's (1975, 1987, 1993) integration model outlined above. The intercultural perspective addresses the cultural foundations and

self-determinism critiques by underscoring institutional responsibility in validating the cultural backgrounds of college students of color, and it addresses the social integration critique by focusing on connections to collective and individual cultural agents regardless of whether they happen inside or outside the classroom. Finally, the perspective responds to the psychological dimension critique by acknowledging that students' cultural meaning-making systems shape their experience, their experienced cultural dissonance represents a barrier to success, and the extent to which their cultures are validated positively impacts their success. Yet, while it is possible for scholars to create models to test specific elements of the intercultural perspective (e.g., Museus and Maramba 2011), the perspective itself does not intuitively translate into a holistic framework of success among racially diverse students. Given the important role of quantitative analyses in the testing and (in)validation of theory in education research, such perspectives have important utility but also have limited impact unless they can be easily converted into quantifiable and testable models.

In summation, the aforementioned culturally relevant alternatives to Tinto's (1975, 1987, 1993) integration theory have made important contributions to the knowledgebase but have not garnered attention equivalent to that given to his model. The limited attention given to these alternatives could be due to many reasons, such as higher education researchers' overemphasis on examining the validity of Tinto's integration theory despite its limitations and other factors discussed above (e.g., the heavy reliance of inter-citation in the field), and a holistic discussion of such reasons is beyond the scope of this chapter. However, this discussion is intended to clarify that the limited attention given to these alternatives could also partially be due to the fact that these more culturally relevant perspectives exhibit their own significant limitations (e.g., Cabrera et al. 1990, 1992b; Guiffrida 2006; Hurtado and Carter 1997; Kuh and Love 2000; Museus et al. 2008; Museus and Quaye 2009; Nora and Cabrera 1996; Rendón 1994; Rendón et al. 2000; Tierney 1992, 1999). Indeed, the revisions of Tinto's theory do not address all four of the aforementioned major critiques of his perspective, the conceptual divergences from Tinto's model that have emerged address the critiques of his theory but do not offer holistic alternative perspectives of success among diverse populations, and more holistic alternative perspectives do not provide comprehensive models with sets of easily quantifiable and testable hypotheses that can guide new lines of empirical inquiry. Moreover, most of the aforementioned model revisions, conceptual divergences, and new perspectives do not reflect, in a comprehensive way, the existing and growing body of empirical knowledge on the experiences and outcomes of racially diverse student populations.

A Culturally Engaging Campus Environments (CECE) Model of College Success Among Racially Diverse Student Populations

In this section, I utilize existing research on racially diverse college student populations to generate and present a Culturally Engaging Campus Environments (CECE) model of success among diverse populations (see Fig. 5.1). This theoretical model
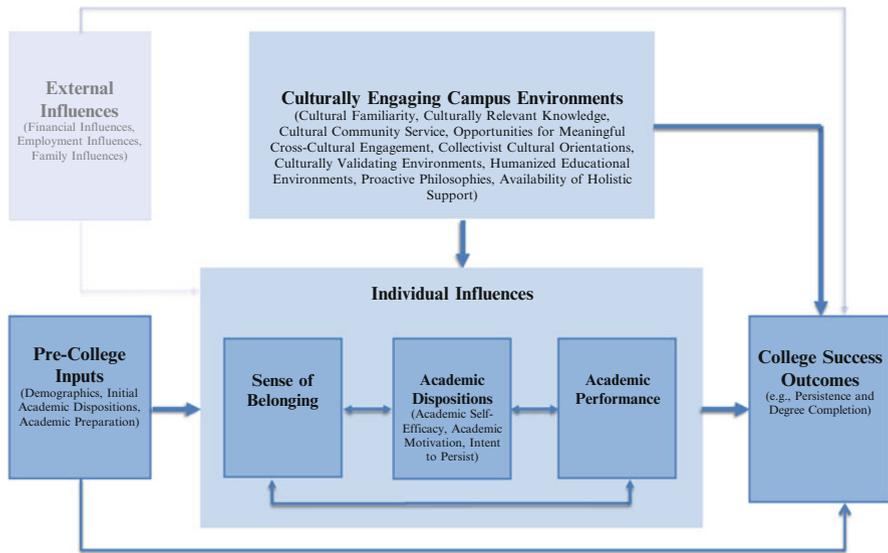
Fig. 5.1 The Culturally Engaging Campus Environments (CECE) model of college success

(1) takes the four main critiques of Tinto's theory and other traditional perspectives into account, (2) incorporates the actual voices of diverse populations into its explanation of success in college, and (3) offers a theoretical model that can be quantified and tested for its applicability to racially diverse college student populations, examined for its power to explain college success, and (in)validated.

The CECE model posits that a variety of external influences (i.e., finances, employment, family influences) shape individual influences (i.e., sense of belonging, academic dispositions, and academic performance) and success among racially diverse college student populations (Fig. 5.1). The model also suggests that college students enter higher education with precollege inputs (i.e., demographic characteristics, initial academic dispositions, academic preparation) that influence individual influences and success. The focal point of the model underscores the environmental (i.e. culturally engaging campus environments) and individual influences on college success. Specifically, the focal area of the model suggests that the degree to which culturally engaging campus environments exist at a particular postsecondary institution is positively associated with more positive individual factors and ultimately greater college student success. Finally, the model posits that the aforementioned individual influences are positively associated with greater likelihood of college persistence and degree attainment.

In the following subsections, I provide an overview of the various constructs in this new emergent theory and discuss evidence that provides the rationale their inclusion in the proposed CECE model. The first two subsections very briefly discuss contextual influences (i.e., *external influences* and *precollege inputs*) within the framework, which do not constitute the focal point of the CECE model but are important to acknowledge for their influences on college student success outcomes

and control in analyses of the CECE Framework. The following two sections delineate the focal constructs in the model. Specifically, the third subsection outlines the nine indicators of *culturally engaging campus environments* that are hypothesized to influence success among racially diverse college student populations. The last subsection focuses on *individual influences*, including college students' sense of belonging, academic dispositions (i.e., academic self-efficacy, academic motivation, and intent to persist), and academic performance.

Before delineating the specific components of the CECE model in greater detail, it is important to underscore that the nine CECE indicators that comprise the CECE construct within the model are intended to be the most salient contribution of this framework to college success discourse. These nine CECE indicators constitute a synthesis of the elements of campus environments that existing evidence suggests promote success among racially diverse populations, the primary construct upon which future analyses of the CECE model should focus, and a centerpiece that can facilitate thinking and discourse around what types of environments college educators should invest time and energy cultivating on their campuses.

External Influences

The CECE model acknowledges that external influences (e.g., financial factors, employment, and family influences) shape the success of racially diverse student populations. Indeed, there is a plethora of evidence that finances have an impact on the experiences and success of college students in general (Pascarella and Terenzini 1991, 2005). For example, most studies on the relationship between the cost of college and success indicate that *tuition costs* are inversely related to college success (Cofer and Somers 1999; Paulsen and St. John 2002; St. John and Starkey 1994, 1995a, b). In addition, a significant body of evidence indicates that receipt of *financial aid awards* is positively associated with a greater likelihood of success among students (e.g., Astin 1993; Cabrera et al. 1990; Chen and DesJardins 2010; Dynarski and Scott-Clayton 2013; Ishitani and DesJardins 2002; McKinney and Novak 2013; Wei and Horn 2002). Moreover, existing research indicates that *grants and scholarships* are positively related to persistence and degree completion among college students (Alon 2011; Astin 1993; DesJardins et al. 2002; Gross 2011; Heller 2003). Alternatively, empirical investigations that examine the impact of the receipt of *loans* and *work study* on college success provide mixed findings, with some inquiries showing that they exhibit both complex positive influences and others concluding that they exhibit negative effects on success (Dowd and Coury 2006; Dwyer et al. 2012; Gross 2011; Museus 2010; Pascarella and Terenzini 2005). Finally, a handful of inquiries illuminate the positive relationship between *ability to pay* for college and success in higher education (e.g., Choy 2000; St. John et al. 2000).

In addition to financial factors, existing empirical evidence suggests that *employment* during college, including the number of hours undergraduates work and the location of their jobs, is a significant predictor of success in higher education (Pascarella and Terenzini 1991, 2005). For example, existing empirical research indicates that, as the number of hours that students work off campus increases, the likelihood that these undergraduates will begin or continue to enroll full time, persist, and graduate decreases (Astin 1993; Choy 2000; Nora et al. 1996). Finally, as briefly discussed above, existing evidence suggests that *family influences* (e.g., family encouragement and support) also shape the experiences and outcomes of racially diverse college student populations (Museus 2013a; Kiang 2002, 2009; Museus and Maramba 2011; Nora and Cabrera 1996).

Precollege Inputs

The CECE model also acknowledges that the characteristics that racially diverse undergraduates bring with them to college (i.e., demographic factors, initial academic dispositions, and academic preparation) influence their experiences and outcomes in higher education. Indeed, consistent with the proposed model, research suggests that *demographic factors* (e.g., age, race, socioeconomic status, gender, parental education) influence individual factors in college (e.g., sense of belonging, subsequent academic dispositions, and academic performance) and college success outcomes (e.g., Bowen and Bok 1998; Massey et al. 2006; Pascarella and Terenzini 1991, 2005). In addition, the model indicates that the *initial academic dispositions* (i.e., academic self-efficacy, academic motivation, intent to persist and graduate) that students bring to higher education influence individual factors (e.g., sense of belonging, subsequent academic dispositions, and academic performance) in college and success. I discuss the influence of these individual factors in the section below, where I provide an overview of the ways that they influence college experiences and outcomes. Finally, consistent with the CECE model, a substantial body of existing literature indicates that *academic preparation* is a significant predictor of student success in higher education (Abraham 1992; Chancey and Farris 1991; Schudde 2011).

The aforementioned external factors and precollege inputs constitute important context for the focal point of the proposed model, which underscores the campus environmental and individual factors that influence college student success. Specifically, the *culturally engaging campus environments* construct focuses on the extent to which campus environments engage the cultural identities of racially diverse student populations and reflect the needs of these students. The *individual influences* variable includes the academic and psychosocial factors that impact *success* among racially diverse populations. The remainder of this discussion describes these environmental and individual factors that comprise this focal point of the current model.

Culturally Engaging Campus Environments

The CECE model posits that undergraduates who encounter more culturally engaging campus environments are more likely to (1) exhibit a greater sense of belonging, more positive academic dispositions, and higher levels of academic performance and ultimately (2) be more likely to persist to graduation. In addition, the CECE model suggests that there are nine indicators of culturally engaging campus environments. Put another way, the CECE model hypothesizes that there are nine indicators of culturally engaging campus environments that engage students' racially diverse cultural backgrounds or identities, reflect their diverse needs as they navigate their respective institutions, and facilitate their success in college.

CECE Indicator #1: Cultural Familiarity

First, the CECE model posits that the extent to which college students have opportunities to physically connect with faculty, staff, and peers with whom they share common backgrounds on their respective campuses is associated with greater likelihood of success. This hypothesis is consistent with existing research that indicates that students who are able to establish connections with institutional agents who have similar backgrounds and experiences as them are more likely to succeed in college (Burrell 1980; Guiffrida 2003, 2005; Harper and Quaye 2007; Museus 2008b, 2010, 2011a, b; Museus and Neville 2012; Museus and Quaye 2009; Museus and Ravello 2010; Sedlacek 1987). For example, several qualitative inquiries have demonstrated how college students of color benefit from connections with same-race agents on their respective campus, as well as different-race institutional agents who have shared and understand their background or individual experiences (e.g., Guiffrida 2005; Harper and Quaye 2007; Museus and Neville 2012).

CECE Indicator #2: Culturally Relevant Knowledge

Second, the CECE model indicates that postsecondary institutions that offer opportunities for their students to cultivate, sustain, and increase knowledge of their cultures and communities of origin can positively impact their experiences and success. Specifically, the extent to which students have opportunities to create, maintain, and strengthen epistemological connections to their home communities through spaces that allow them to acquire knowledge about their communities of origin is associated with increased likelihood of success. For White students from low-income backgrounds, for example, access to social sciences courses that provide opportunities to learn about class inequalities and oppression might offer those students opportunities to develop epistemological cultural connections. For college students of color, involvement in ethnic studies courses, culturally relevant courses and programming, and ethnic student organizations on campus might

be salient vehicles for the development and maintenance of epistemological cultural connections. This proposition is congruent with existing qualitative research that suggests that, when students have opportunities to learn and share knowledge about the issues within and needs of their own communities of origin, it can be associated with stronger connections to their respective institutions, higher levels of motivation, and greater likelihood of success (e.g., Guiffrida 2003, 2005; Harper and Quaye 2007; Kiang 2002, 2009; Museus 2008b, 2011b; Museus et al. 2012).

CECE Indicator #3: Cultural Community Service

Third, the CECE Framework hypothesizes that cultural community service positively impacts the experiences and success of racially diverse populations. Cultural community service manifests when institutions provide students with spaces and tools to give back to and positively transform their cultural communities via various mechanisms, including activities aimed at spreading awareness about issues in their respective communities, engaging in community activism, participating in community service and service-learning opportunities, or engaging in problem-based research projects that aim to solve problems within their cultural communities. The model suggest that the level of access that students have to opportunities to develop such transformational cultural connections is positively associated with success. And, this concept of transformational cultural connections is congruent with extant empirical research, which suggests that activities allowing both White students and students of color to give back to their communities are linked to stronger connections to their respective campuses, which are related to higher levels of success in college (Astin and Sax 1998; Eyler and Giles 1999; Guiffrida 2003; Harper and Quaye 2007; Museus 2008b, 2011b; Museus et al. 2012; Museus and Quaye 2009).

CECE Indicator #4: Opportunities for Meaningful Cross-Cultural Engagement

Fourth, the CECE Framework indicates that students' access to opportunities for meaningful cross-cultural engagement is positively associated with their success in college. The model indicates that opportunities to engage in positive and purposeful interactions with peers from disparate cultural origins can have a positive impact on college experiences and success. Although research examining the relationship between meaningful cross-cultural engagement and persistence and attainment in college is difficult to find, existing literature does offer substantial evidence that campus environments that promote meaningful cross-cultural engagement are conducive to many positive outcomes in college. For example, a plethora of quantitative inquiries suggest that environments that promote such engagement lead to higher levels of learning, development, and cultural awareness (e.g., Antonio 2004; Antonio et al. 2004; Astin 1993; Chang 2001; Chang et al. 2004; Gruenfeld et al. 1998; Gurin et al. 2003; Hurtado 2005; Jayakumar 2009; Locks et al. 2008; Milem

et al. 2005; Nelson-Laird et al. 2005; Pettigrew and Tropp 2006; Sáenz et al. 2007; Zuniga et al. 2005). In addition, this evidence indicates that campus environments that are conducive to meaningful cross-cultural engagement are also associated with higher levels of self-confidence, satisfaction, and sense of belonging among both White students and students of color in college – which are related to greater levels of success.

CECE Indicator #5: Collectivist Cultural Orientations

Fifth, the CECE model proposes that college students who encounter institutional environments that are based on more collectivist cultural orientations, as opposed to more individualistic ones, are more likely to succeed. This proposition is congruent with existing evidence indicating that both White students and students of color from communities with more collectivist cultural orientations might encounter salient challenges adjusting to and navigating colleges and universities with more individualistic orientations (Dennis et al. 2005; Thompson and Fretz 1991). In addition, researchers have underscored the potential positive impact of collective environments on the success of racially diverse student populations (Fullilove and Treisman 1990; Guiffrida 2006). However, heretofore, scholarship that actually empirically tests the relationship between collectivist cultures and success outcomes is difficult to find.

CECE Indicator #6: Culturally Validating Environments

Sixth, the CECE model postulates that culturally validating environments are positively related to success in college. Specifically, the CECE Framework suggests that students who are surrounded by postsecondary educators who validate their cultural backgrounds and identities will have more positive experiences and be more likely to succeed in college (Barnett 2011a, b; Museus and Quaye 2009; Nora et al. 2011; Rendón and Muñoz 2011; Rendón 1994). Cultural validation can be considered the extent to which postsecondary institutions and educators convey that they value the cultural backgrounds and identities of their diverse college student populations. The inclusion of cultural validation in the CECE model is congruent with a small and growing body of empirical scholarship that suggest that such validation has a positive impact on the adjustment, sense of belonging, academic dispositions, and success of racially diverse students in college (Barnett 2011a; Gloria et al. 2005; Museus and Quaye 2009; Rendón 1994; Rendón et al. 2000; Tierney 1992, 1999). For instance, Barnett (2011b) examined a sample of 263 community college students using linear regression analysis and concluded that faculty validation of two-year college students was a significant, strong, and positive predictor of intent to persist.

CECE Indicator #7: Humanized Educational Environments

Seventh, the CECE model hypothesizes that the extent to which students encounter humanized educational environments on their campuses is related to more positive experiences and a greater likelihood of success. The concept of humanized educational environments refers to campus environments that are characterized by institutional agents who care about, are committed to, and develop meaningful relationships with their students. The incorporation of humanized educational environments within the CECE model is consistent with a small and growing body of qualitative and quantitative evidence that such environments are related to more positive experiences and greater likelihood of success among racially diverse student populations (Guiffrida 2003; Rendón and Muñoz 2011; Museus 2011a; Museus and Neville 2012; Museus and Ravello 2010; Nora 2001; Nora and Crisp 2009). For example, Museus qualitatively analyzed the campus cultures of three institutions that exhibited high and equitable persistence and degree completion rates among their Asian American, Black, Latino, and White students. He concluded that the cultures of these institutions were, in part, characterized by "a belief in humanizing the educational experience" – which was characterized by the aforementioned caring, commitment, and relationships – contributed to the success of undergraduates on those campuses (p. 10).

CECE Indicator #8: Proactive Philosophies

Eighth, the CECE model indicates that the existence of proactive philosophies at postsecondary institutions is positively associated with the likelihood of success among racially diverse college student populations on their respective campuses. That is, the model indicates that, when faculty and staff go beyond making information and support available to making extra efforts to bring that information and support to students and maximize their likelihood of success, they can increase the rates of persistence and attainment of among the racially diverse college student populations they serve. This construct is congruent with existing evidence that highlights the positive influences of such proactive philosophies and practices (Guiffrida 2005; Jenkins 2006; Museus and Neville 2012; Museus and Ravello 2010; Rendón 1994; Rendón and Muñoz 2011). Indeed, multiple qualitative studies of success among students of color have concluded that proactive philosophies and approaches to serving undergraduates were associated with greater likelihood of success among their participants (Guiffrida 2005; Jenkins 2006; Museus and Neville 2012; Museus and Ravello 2010).

CECE Indicator #9: Availability of Holistic Support

Finally, the CECE Framework posits that the availability of holistic support on college and university campuses is positively associated with levels of success among their respective student bodies. The availability of holistic support is characterized by the extent to which postsecondary institutions provide their students with access to one or

more faculty or staff members that they are confident will provide them with the information they seek, offer the help that they require, or connect them with the information or support that they need. While research examining the impact of holistic support is limited, the literature that does exist suggests that this type of support facilitates success among racially diverse college student populations (e.g., Guiffrida 2005; Jenkins 2006; Museus and Ravello 2010). More specifically, evidence suggests that, when students are not always expected to hunt down the information and support they require on their own, but rather can access one or more institutional agents that function as conduits to broader support networks on their campuses, those students are more likely to succeed in college (Museus and Neville 2012).

Individual Influences

The final construct that constitutes a predictor of success among racially diverse student populations in the CECE model is *individual influences.* Specifically, the CECE Framework model posits that students' sense of belonging, academic dispositions, and academic performance exhibit significant influences on their college persistence and degree completion.

Sense of Belonging

The CECE Framework postulates that *sense of belonging* is positively associated with success among racially diverse student populations in college. Indeed, higher education scholars have offered the sense of belonging construct as an alternative to Tinto's concepts of academic and social integration (Hurtado and Carter 1997). And, existing research is consistent with the incorporation of the sense of belonging construct in the CECE model. While scholarship that examines the relationship between sense of belonging and persistence and completion outcomes is difficult to find, a handful of studies indicate that sense of belonging is both a valid construct among racially diverse student populations and a significant predictor of success in college (Hausmann et al. 2007; Hoffman et al. 2002; Lee and Davis 2000; Locks et al. 2008; Museus and Maramba 2011; Strayhorn 2012). For instance, Hausmann et al. controlled for a variety of background, integration, commitment, and support variables, and they analyzed a single-institution sample of 365 Black and White students using growth-modeling techniques. The authors concluded that sense of belonging was a positive significant predictor of intent to persist.

Academic Dispositions

A second individual influence variable included in the CECE model is *academic dispositions.* A substantial body of research indicates that students' academic dispositions influence their success in college. For example, extant evidence suggests that

academic self-efficacy (i.e., students' confidence in their own intellectual abilities to succeed in the academic arena) is significantly and positively associated with success in college. Indeed, prior research demonstrates that higher levels of academic self-efficacy are positively related to both academic performance (e.g., grades) and persistence (Bong 2001; Brown et al. 1989; Gloria and Kurpius 1996; Hackett et al. 1992; Lent et al. 1984, 1986, 1987; Multon et al. 1991; Robbins et al. 2004). Robbins et al. (2004), for instance, conducted a meta-analysis of 109 empirical inquiries, and they concluded that college students' confidence in their own academic abilities is a significant predictor of college persistence and degree attainment.

Another academic disposition that has been positively associated with college outcomes is *academic motivation* (Guiffrida 2006). Although only a few existing studies examine the relationship between academic motivation and academic outcomes, such as grade-point average and persistence, they suggest that there is a significant and positive relationship between these constructs (Allen 1999; Côté and Levine 1997; Dennis et al. 2005; Vallerand and Bissonnette 1992). For example, Allen (1999) examined a sample of 1,000 first-year students' backgrounds, motivation, performance, and persistence and found that motivation was a significant, positive, and strong predictor of college persistence among students of color. Therefore, although more empirical research examining the salience of academic motivation is needed, the research that does exist indicates that it is a significant predictor of student success in college.

A final academic disposition included in the CECE model is *intent to persist* to graduation. The inclusion of the intent to persist variable in the CECE model is consistent with both common sense and existing scholarship suggesting that the intent to persist is a positive and powerful predictor of persistence and degree completion in college (Cabrera et al. 1992a, 1993). For instance, Cabrera et al. utilized a single-institution sample of 2,459 first-year college students and structural equation modeling techniques to examine the influence of a range of background, financial, and experiential variables on first-year persistence in college. They concluded that intent to persist was the most powerful predictor of first-year persistence in their analysis.

Academic Performance

The final individual influence included in the CECE model is *academic performance.* Existing empirical evidence shows that academic performance is one of the strongest predictors of college persistence and degree completion (e.g., Museus 2010; Museus et al. 2008; Nora and Cabrera 1996). Byun et al., for example, conducted a logistic regression analysis of a nationally representative sample of 6,000 four-year college students from urban, rural, and suburban geographic origins and concluded that college GPA was one of the most powerful predictors of bachelor's degree attainment for all three subgroups. In sum, existing research suggests that the individual influences within the CECE model are important predictors of persistence and degree completion in higher education.

A Few Important Considerations

Before discussing the implications of the CECE model, a couple important caveats are warranted. First, a clarification regarding the nature of the student population that the model is intended to serve is in order. At the beginning of this chapter, I define racially diverse college student populations as a term inclusive of both White students and undergraduates of color. At the same time, given the reality that one of the intended outcomes of the CECE model is to address limitations of traditional college success perspectives, the vast majority of empirical research that I use to justify the importance of the CECE model and much of the research used to create the key CECE construct within the framework are empirical inquiries that examine the experiences of various populations of color in college. In recognition that this discrepancy could cause some confusion or be perceived as an inconsistency, it is important to clarify herein that the CECE model is hypothesized to explain how environments influence success among racially diverse populations, including both White students and students of color.

The hypothesis that the CECE model is applicable to the racial majority might seem counterintuitive to some readers because some of the CECE variables are derived primarily from research that excavates the voices of racial minority students and, at least on the surface, might appear to be more relevant to students of color than their White counterparts. For example, students' connections to their cultural communities have primarily been discussed in the literature on students of color in college (e.g., Kuh and Love 2000; Museus 2011b; Museus et al. 2012; Museus and Maramba 2011; Museus and Quaye 2009; Rendón et al. 2000; Tierney 1992, 1999). However, it is important to acknowledge that, as mentioned above, such environmental factors could influence success among White college students as well. The intent herein is not to make definitive claims about the validity of this model among any racial group, but instead to propose that this is a framework of success that researchers can examine and (in)validate among both racial majority and minority populations through future empirical inquiries. Therefore, framing the model as a tool to examine racially diverse populations in general is done to call on researchers to test the framework among White students, as well as their counterparts of color. Of course, until research does examine the validity of the model among different racial groups, conclusions about its applicability to any racial population should be made with caution.

Second, it is important to say a word about the focus on environmental factors that *promote* success among diverse student populations in the CECE model, rather than the negative environmental pressures that might *hinder* the success of those students. As discussed above, extant research underscores the negative pressures that students of color, in particular, experience in the context of predominantly White colleges and universities. And, Dowd et al. (2011) have recently underscored the need for taking those negative pressures into account in the development of college success models. Their perspective, at least in part, is based on (1) their recognition of the importance of centering racial and cultural context in success frameworks

and (2) the premise that high-impact practices that facilitate positive behaviors that are central to traditional perspectives (e.g., engagement in educationally purposeful activities) can be present simultaneously with negative and harmful racial and cultural environments. For example, they assert that, "a constructivist curriculum based on active learning can still be color-blind and fail to be culturally inclusive" (p. 19). Thus, they underscore that only measuring the former reality and not the latter can lead to the acquisition of a partial de-racialized and a-cultural picture and potentially misleading conclusions regarding the ways that college curricula, programs, and practices are affecting college student outcomes on their respective campuses.

It is important to note that I share Dowd et al.'s (2011) perspective regarding the importance of accounting for the negative environmental pressures that students might encounter in college. However, their analysis was offered in the context of a discussion about the limitations of student engagement and other traditional success perspectives, which omit intricate considerations of the role of racial and cultural contexts from their explanations of success. Unlike these traditional frameworks, the CECE model includes the CECE indicators, which indirectly account for the potentially negative aspects of the campus environment. The CECE model and indicators indirectly account for those negative pressures because the underlying assumption of the CECE model is that the greater the extent to which students encounter campus environments that are characterized by the CECE indicators, the less likely they are to encounter the aforementioned negative pressures. To borrow and build upon Dowd et al.'s (2011) example for purposes of illustration, where students frequently encounter elements of culturally engaging campus environments – such as environments that provide opportunities to gain culturally relevant knowledge and engage in cultural community service, perpetuate collectivist values, and validate their cultural backgrounds and identities – they are less likely to perceive those environments as exclusionary, experience hostile climates, and feel excluded within the cultures of their respective campuses.

In addition, in structuring the CECE model around positive aspects of campus environments that existing research suggests promote success among racially diverse populations, the intent is to provide a set of indicators that might be able to guide institutional action toward positive transformation. Just as much of the value of the concept of student engagement can be found in its ability to stimulate dialogue about where educators can invest their energies to enrich the college experience for their students (Wolf-Wendel et al. 2009), the potential value of the CECE indicators is a function of their ability to stimulate discourse and constitute a roadmap for institutions that are serious about maximizing success among racially diverse student populations – a point to which I return in the concluding section below.

Finally, the CECE model is not intended to replace other existing frameworks of student success. The model's primary focus is on disentangling and explaining the nature of campus environments that can promote success among racially diverse student populations. Useful frameworks have been generated to explain the impact of other factors, such as finances and student behavior, on student success in college. And, the CECE model is designed to compliment these earlier perspectives by

stimulating the development of a new body of scholarship where a significant gap currently exists. Thus, it might be most useful for higher education researchers, policymakers, and practitioners to use the CECE model in conjunction with other theoretical perspectives when seeking to acquire more holistic understandings of the variety of factors that influence success outcomes in postsecondary education.

Conclusion

The current chapter proposes a new theoretical perspective that is designed to provide a foundation for future research on diverse college students' success and contribute to ongoing conversations that continue to move the field of higher education toward a new generation of research on college success. In this final section, I conclude the chapter with a handful of implications for future higher education research and practice.

In order for the CECE model to be a useful tool in advancing theory and research in higher education, future scholarship must quantify, test, and (in)validate the framework among racially diverse college student populations. First, future empirical research must examine the validity and reliability of the CECE indicators within the CECE model among different student subpopulations (e.g., different genders, racial and ethnic populations, and socioeconomic groups) and in various institutional contexts (e.g., four- and two-year postsecondary institutions, commuter and residential college and university campuses, public and private institutions, and postsecondary campuses with varying racial and ethnic compositions).

Second, examinations of whether and to what extent the CECE model predicts persistence and degree completion must be conducted. Indeed, the predictive validity of the CECE model should be examined with samples that include aggregated college student populations in general, as well as with disaggregated samples of specific racial and ethnic groups in order to assess the proposed theory's applicability to various racial and ethnic communities. For the higher education research community to advance knowledge of college success in ways that more accurately reflect the realities of diverse populations, catalyze fresh lines of scholarly inquiry that will catapult our field into the next generation of research on diverse student bodies, and shift perspectives about college success among diverse populations in positive directions, postsecondary education scholars must adopt, test, and (in)validate new theoretical models of student success, such as the one presented herein.

Third, because the CECE model is somewhat complex and includes a wide range of variables and hypotheses, for heuristic purposes, it might be useful to magnify the focal point of the CECE Framework that highlights key variables and relationships on which future research should focus. Figure 5.2 displays the focal constructs and relationships within the CECE model. The dark unidirectional lines represent hypothesized causal relationships, while the lighter and more transparent bidirectional lines represent correlational relationships. While the latter are important, the causal relationships displayed in this figure are of primary concern, and future empirical inquiries should focus energies on testing the extent to which these
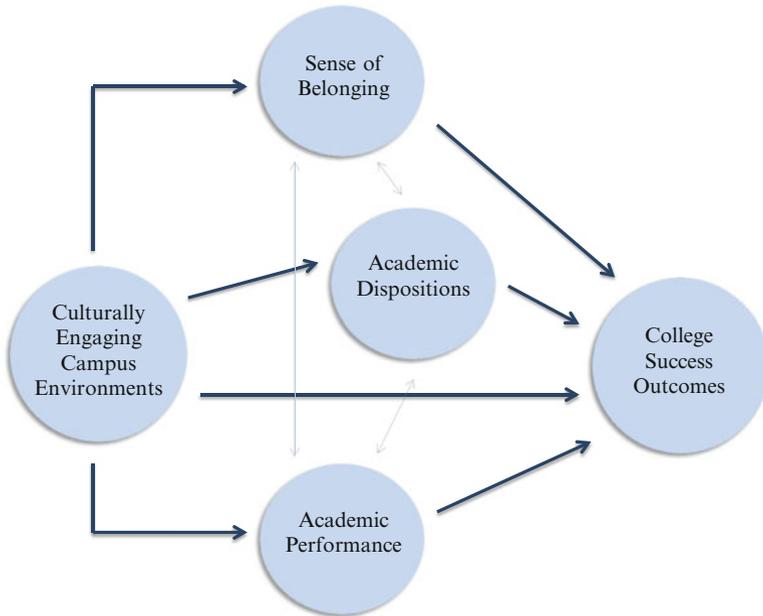
Fig. 5.2 Focal point of the Culturally Engaging Campus Environments (CECE) model

relationships are present. It should be noted that analyses of these relationships among various demographic groups within varied institutional settings are under way, and the results of these inquiries will soon shed much light on the utility of the CECE model and its corresponding CECE indicators.

Moreover, if assessment specialists and college educators who aim to design institutional environments, curricula, programs, and practices adopt the CECE model, this framework could have critical implications for policy and practice at postsecondary institutions. For example, the CECE model could be a useful tool for institutional leaders to better understand the ways in which their respective campus environments might be influencing the experiences and outcomes of their diverse students. The framework can also serve as an important tool for institutional leaders, assessment specialists, and college educators to utilize in efforts to assess their respective campus environments, pinpoint areas for improvement, and construct holistic intervention efforts aimed at transforming their institutions in ways that better serve their racially diverse student populations. Specifically, the CECE model can provide a useful conceptual lens for college educators to examine and illuminate the extent to which the environments on their respective campuses reflect the CECE indicators, assess which indicators are associated with success at their institutions, and clarify how they can cultivate more culturally engaging campus environments to maximize success among their racially diverse student populations – all critical components of holistic efforts to promote institutional transformation toward the end of maximizing college success outcomes.

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