College Access and Success Assessment:

A Conceptual Framework for Assessing High School College-Going Cultures

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President Obama has challenged the nation to reclaim its place as the world leader in educational attainment by the year 2020. Such a lofty goal can only be achieved, however, if the nation's high schools prepare their students for postsecondary success. Research shows that traditionally underrepresented students may lack the knowledge and guidance on how to enter and succeed in college, but also rely most upon their school for this knowledge and guidance (Freeman, 2005; Roderick, Coca, Nagaoka, 2011). Thus, high schools need effective college-going cultures to foster postsecondary success for all students, and in particular, to ensure that low-income, first-generation, and minority students have equitable opportunities. In order to create college-going cultures, the nation's high schools must have the capacity to gather, analyze, and use information to inform strategic decisions to prepare all students so that they may have the opportunity to pursue ambitious postsecondary and career goals (Schramm & Zalesne, 2009).

Although existing research speaks to ways high schools can enhance their college-going culture, schools do not currently have reliable and comprehensive tools that allow them to assess the extent to which they have a college-going culture, benchmark to other schools, and make targeted improvements where needed. Effective school improvement approaches depend upon access to data that speaks to the unique challenges and opportunities facing each school (Tucci, 2009). Moreover, in a K-12 educational reform era that is increasingly data-driven and outcomes-oriented, American high schools must provide evidence that their efforts prepare and guide students to pursue a wide range of postsecondary options. In essence, an educated, economically productive and engaged citizenry in the 21st century will depend upon the extent to which America's high schools, most notably its urban high schools, are able to empirically

evaluate and enhance ongoing efforts to ensure their students are encouraged and prepared for college and career success.

The aim of this paper is to present a conceptual framework that can be used to examine college-going culture within high schools. In this conceptual model, we build on Kaufman's (2005) conceptualization of college-going culture, which is defined as the environment, attitudes, and behaviors within the high school that encourages students and their families to obtain the requisite knowledge and skills necessary to pursue a postsecondary education and succeed. Using Kaufman's (2005) definition as a foundation, the College Access and Success (CASA) conceptual model examines how high school college-going culture influences postsecondary access and success. Specifically, the CASA framework proposes that the school's college-going culture can be measured by assessing perceptions of the environment, student attitudes, and student behaviors. Moreover, CASA advances the notion that assessments must be linked to student outcomes to determine how influential college-going culture is in providing the opportunities and perspectives necessary to ensure access to *and* success in postsecondary education for all students. An extensive literature review is presented to provide support for this model that accounts for student level and school level factors that influence college-going. The goal of this framework is to inform future research and practice that aims to assess and improve college-going culture in America's high schools.

Current State of Assessments on College-Going Culture

Among the recent growth of curricular assessments in the K-12 system meant to ensure academic preparation, most notably the development of assessments for the Common Core State Standards (CCSS), there is a conspicuous lack of assessments that help schools prepare their students for postsecondary success beyond the core curriculum. Indeed, since students are

already heavily assessed in terms of academic context, we must evaluate college readiness

beyond the existing curricular dimensions to help increase college access and persistence for all

students, including those who may be disadvantaged. As education researchers point out, the

"conventional view that academic preparation is a monolithic barrier to access and choice among

low-SES students is greatly overstated. There are large numbers of students from families with

low income and low levels of parental education that are academically prepared for

baccalaureate degree attainment, even in the most-selective colleges" (Carnevale & Strohl, 2010,

p. 161-162). Moreover, low-SES and traditionally underrepresented minorities enroll in college

at a lower rate compared to their higher-SES and white peers (Carnevale & Strohl, 2010). These

inequitable rates of enrollment point to the need for additional assessments that comprehensively

evaluate other elements within a high school and students that may more significantly impact

their postsecondary opportunities.

        Despite the need for assessing college-going culture, there are presently few tools and

measures that schools can use to benchmark their efforts and identify strategies to better prepare

their students for postsecondary access and success. While assessments are critical for ushering

students on the path to college enrollment, no instrument evaluates college-going culture for

schools and districts (Tierney, Bailey, Constantine, Finkelstein, & Hurd, 2009) or measures its

impact by linking to educational outcomes. A major exception is the Consortium on Chicago

School Research (CCSR) whose surveys capture teacher, administrator, and student perspectives

on different aspects of a high school's climate, including accessibility to college information.

However, the survey is only available to Chicago Public Schools. Another survey developed by

the Educational Policy Improvement Center (2012), assesses college and career readiness from

the perspective of students, teachers, counselors and administrators to obtain a comprehensive

perspective of the key actors within a high school. However, there is not a clear indication of how these diagnostic tools are tied to student postsecondary enrollment. The ACT has also developed assessments to help schools enhance academic performance and college preparation by measuring behaviors and psychosocial characteristics that are not reported through standardized academic tests (ACT, 2012). Unfortunately, this instrument does not capture any information on the high school environment despite the impact that the high school culture can have on student attitudes and behaviors. Overall, these current assessments do not utilize a holistic approach in assessing student characteristics and perceptions of environmental factors that influence college access and success.

Consequently, the CASA framework bridges these assessment gaps by considering both the student and school level characteristics that collectively influence whether students continue their education after high school. The design of instruments and research studies based on the CASA model enables further exploration of the relationship between college-going culture and outcomes. At a practical level, CASA also provides a useful framework through which schools can assess college-going culture to create systemic change. Existing best practices literature speaks to the ways schools can improve their college-going culture. Additionally, educational and sociological literature outlines various types of capital that have helped practitioners and policymakers better understand elements that influence college attendance and student success. However, until recently, much of this literature had not been empirically tested or synthesized into diagnostic instruments that fully allow schools to assess and improve their college-going culture. As such, assessments developed from a comprehensive conceptual framework that account for the multiple components within the high school purview would more extensively and accurately measure college-going culture and its impact on student outcomes.

Overview of the CASA Model

The CASA framework is multi-layered and accounts for how the high school context, particularly college-going culture, influences student postsecondary enrollment decisions beyond their individual predispositions (see Figure 1). Students are at the center of the model and are nested within the college-going culture of their high schools. Beyond their demographic characteristics and academic achievement, students also possess a set of attitudes and behaviors that either predispose or deter them from being college-ready. However, the extent to which the high school college-going culture promotes and encourages all students to pursue a postsecondary education also has the potential to alter student attitudes and behaviors that can channel students towards higher education. The CASA model thus aims to isolate the high school context of a college-going culture to assess its influence on student postsecondary access and success beyond individual characteristics.

In defining the college-going culture within a high school context, CASA proposes that it is comprised of three components: environmental, attitudinal, and behavioral. The environmental component represents qualitative aspects of the high school environment that promote the notion that college is within every student's reach regardless of personal background. At an aggregate level, student attitudes and behaviors also form part of a school's norms associated with college-going. Consequently, the student level and high school context of college-going culture are mutually dependent as suggested by Engberg and Wolniak (2010). In their conceptual model, they show the varying levels of human, cultural, and social capital that students and high schools possess, which in turn influence student postsecondary enrollment. In a similar fashion, our model proposes that student attitudes and behaviors at the individual and high school level interdependently represent the school's college-going culture in conjunction

with the school's structural aspects, which collectively influence student postsecondary access and success.

The CASA model is largely influenced by previous research and organizational theory that identifies a high school's college-going culture as a key factor in student postsecondary access and subsequent success. In a multi-contextual model of student college choice, Perna (2006) identified schools and communities as the most proximal layer influencing student postsecondary decisions beyond student demographic characteristics and individual habitus. The importance of the high school context reflects McDonough's (1997) notion of *organizational habitus*, which is the influence of an organization on an individual's behavior based on his/her cultural group or social class. High schools as organizations shape students' postsecondary options through the availability of resources along with structural supports and barriers (Perna, 2006). Accordingly, existing best practices literature speaks to the ways schools can improve their college-going culture as a way to expand postsecondary access for high school students, especially those who are the least likely to pursue a postsecondary education (College Board, 2006; Corwin & Tierney, 2007; Kaufman, 2005; McClafferty, McDonough & Nuñez, 2002; Tierney, W.G., Colyar, J.E., & Corwin, Z.B. 2003). Thus, the CASA model builds on a solid foundation of research and developed theory to quantitatively measure the concept of college-going culture and its impact on student outcomes.

Moreover, CASA incorporates psychological and sociological perspectives to inform each of the components. The components representing student attitudes and behaviors are particularly influenced by these disciplines. For example, social cognitive theory (Bandura, 1997) from psychology is part of the foundation in students' attitudes and their behaviors. The knowledge students acquire shape the attitudes they adopt which in turn influence their behavior

(Bandura, 1997). Also, the attitudinal component was built upon a theoretical foundation

grounded in sociological concepts such as economic, cultural, social, and human capital (Lucido

& Schulz, 2010). Researchers have analyzed these types of capital over the years to learn how

they may influence student behavior in education, particularly with regards to college choice

(Perna, 2006). Yet, previous research has not comprehensively considered how these

perspectives might further our assessment of college-going cultures to guide research and

practice.

The CASA model draws upon and synthesizes prominent college-going research on

school environments, student attitudes, and student behaviors. The following sections present

the literature and theoretical background supporting the components of the CASA conceptual

framework. First, we discuss the outcomes most influenced by the high school college-going

culture. Thereafter, the individual level factors that shape students' postsecondary decisions are

discussed. Finally, we turn our attention to the school-level components that constitute a

college-going culture.

Linking College-Going Culture to Student Outcomes

Increasingly, there has been research documenting the importance of the high school

context in postsecondary outcomes. Scholars have identified specific elements that constitute

college-going culture, including academic preparation, building aspirations, clear mission

statements, and helping students acquire college knowledge, which includes guidance and

information about financial aid, costs, college preparation, college requirements, and the college

application process (Bell, Rowan-Kenyon, & Perna, 2009; Corwin & Tierney, 2007; Hossler,

Schmit, & Vesper, 1999; McDonough, 1997). There are also extensive studies on the perception

of college financial aid while in high school and how these perceptions may influence college

application and choice (Luna De la Rosa, 2006; Perna & Steele, 2011; Zarate & Pachon, 2006). However, the bulk of this research focuses solely on the high school context without taking into account postsecondary outcomes, thus failing to provide rigorous evidence that the high school college-going culture can influence actual college-going.

There is a small but growing body of research seeking to link the high school context of college-going culture to actual college enrollment. For example, Plank and Jordan (2001) and Hill (2008) show that higher levels of information and guidance for college provided during high school are linked to greater levels of postsecondary enrollment. As well, Engberg and Wolniak (2010) present data that high school norms affect postsecondary enrollment, and Roderick, Coca and Nagoaka (2011) offer evidence that high school environments that establish norms for college attendance and support students in the college preparation process are associated with higher college enrollment and greater institutional selectivity.

CASA contributes to this burgeoning area of study with an empirical approach to understanding what aspects of high school college-going culture impact actual college-going rates, linking the three components (environmental, attitudinal, and behavioral) to postsecondary outcomes. Two postsecondary outcomes of access are enrollment in any two or four-year postsecondary institution and enrollment in a four-year institution. The postsecondary outcomes of success include full-time enrollment within any postsecondary institution and first-year retention. Each of these four outcomes is instrumental in subsequent degree completion, or postsecondary success (Adelman, 1999). Furthermore, research shows that the high school context most influences college choice, enrollment, and first-year retention (Johnson, 2008). Beyond first-year retention, the influence of high school wanes and the extent of the student's immersion into the college environment and other external factors should be considered.

Student enrollment in any postsecondary institution (two- or four-year) immediately upon high school graduation is an important indicator of student access. Research shows that delaying entry to college is linked to lower rates of degree completion, even after controlling for academic and demographic factors (Roksa & Velez, 2012). Enrolling in a postsecondary institution upon high school graduation increases the likelihood that a student will complete a degree or certificate program within six years of enrollment (Adelman, 1999). In addition, enrollment in a four-year institution rather than a two-year institution is another critical indicator of access. While community colleges are important in providing postsecondary education to many students in the U.S., statistics show that only 21% of students who enrolled in a community college ended up completing a degree. In comparison, 55% of students who enrolled at a four-year institution completed a degree (Knapp, Kelly-Reid, & Ginder, 2011). Various studies have shown that initial enrollment in a two-year rather than four-year institution can impact degree completion adversely (Alfonso, 2006; Pascarelli & Terenezini, 2005).

As outlined earlier, CASA's model includes two outcomes for student success. Enrollment status is very important to postsecondary success. Full-time enrollment within any postsecondary institution significantly improves the chances of completing a bachelor's degree. Particularly at two-year institutions, full-time enrollment is correlated with a higher rate of degree completion (Adelman, 1999), and part-time enrollment is linked to lower rates of degree attainment, as well as less engagement with the institution, lower levels of learning, and less interaction with faculty (Nelson Laird & Cruce, 2009). Finally, CASA examines persistence in postsecondary success, as first-year retention (measured by enrollment in the first semester of the second year) significantly increases the chances of completing a bachelor's degree. The risk of dropping out of any postsecondary institution is highest in the first year, primarily linked to the

lack of academic performance or credits earned in the first year (Adelman, 1999). As mentioned

earlier, persistence beyond the first year of college is not included in the outcomes, as the

influence of the high school college-going culture may be tenuous at this stage of the student's

educational trajectory.

Student Level Factors

At the student level, our conceptual model triangulates from educational, sociological,

and psychological literature, respectively, to categorize individual-level factors into background

characteristics, attitudes, and behaviors. All three disciplines provide important research that

links these individual level factors to college enrollment and persistence. While in education,

there is a large body of research focused on the influence of background characteristics

(demographic factors, grades, and standardized tests) on postsecondary outcomes, these factors

have also been challenged in their prediction of college outcomes, particularly for

racially/ethnically underrepresented students (Hoffman & Lowitzki, 2005; Moffat, 1993;

Sedlacek, 2004). Many scholars have advocated for use of multiple measures, including factors

beyond academic achievement when analyzing college outcomes (Camara & Kimmek, 2005;

Maruyama, 2012; Thomas, Kuncel, & Crede, 2007; Schmitt, 2012). With CASA, we created a

multifaceted approach with the inclusion of student attitudes and behaviors pertaining to college-

going that delve beyond the realm of academic achievement, in addition to including background

characteristics. This multi-faceted approach ensures that the CASA model is more inclusive as an

assessment of all students' college-going potential, while simultaneously identifying key facets

of the school environment, student attitudes, and student behaviors that contribute to college

access and success.

At the individual level, CASA's attitudinal and behavioral components are primarily informed by psychological and sociological theories. Both components are in many ways, interdependent and share theoretical foundations. Drawing from psychological literature, it is crucial to understand that attitudes influence behaviors. As Bandura (1993) explained, "Among the mechanisms of agency, none is more central or pervasive than people's beliefs about their capabilities to exercise control over their own level of functioning and over events that affect their lives. Efficacy beliefs influence how people feel, think, motivate themselves, and behave" (p. 118). As an example, if a student possesses a higher sense of self-efficacy, this may influence the student's decision to apply to a postsecondary institution, and perhaps a competitive four-year institution, rather than not pursuing college at all.

Sociological theories also provide a framework for understanding how different types of capital affect knowledge, attitudes towards college, and subsequently behaviors that lead to the college enrollment decision. For instance, with regards to economic capital, researchers have found that students make college enrollment decisions in part based upon their perceptions of financial aid availability (Luna De La Rosa & Tierney, 2006), that students with financial resources are more likely to enroll and graduate (Fullinwider & Lichtenberg, 2004), and that there exist clear and substantial class-based patterns of enrollment behavior related to student perceptions and expectations about college costs (Paulsen & St. John, 2002). Cultural capital research shows that parental expectations influence student educational aspirations (Conklin & Dailey, 1981; Flowers, Milner, & Moore, 2003; Garg, Kauppi, Lewko, & Urajnik, 2002; Hossler, Schmit, & Vesper, 1999; Trusty, 1998), college enrollment (Tierney et al., 2003), and student persistence (Kuh & Love, 2002). Research concerning social capital has outlined how relationships can influence college aspiration, application, and enrollment decisions (Freeman,

1997; Howard, 2003; Roderick, Nagaoka, Coca, & Moeller, 2008; Tierney et al., 2003). Finally, human capital research has shown that students who feel academically prepared to succeed in college will be more apt to apply and enroll in a four-year college (Adelman, 1999; Catsiapis, 1987; Tierney et al., 2003). These various species of capital—economic, cultural, and social— should form part of the basis for developing research and assessments of relevant student attitudes and student behaviors related to college-going.

Background Characteristics

Utilizing research from the field of education, background characteristics include demographic factors as well as academic achievement on the student level. Much of the literature in education finds that student access and persistence in college is related to demographic factors, including socioeconomic status, race/ethnicity, and gender. Research shows that socioeconomic status is linked to college enrollment and completion (Bailey & Dynarski, 2011; Belley and Lochner, 2007), as are race/ethnicity (Perna, 2000; Perna & Titus, 2005; Reardon, Baker, & Klasik, 2012), and gender (Bailey & Dynarski, 2011). High school achievement is also important, as studies establish that higher GPA, standardized test scores, and greater participation in honors and other academically-challenging classes, like Advanced Placement (AP), are linked to greater college academic achievement, access and persistence (e.g., Adelman, 2006; Bowen, Chingos, & McPherson, 2009; Perna, 2000; Sackett et al., 2012; Zwick and Sklar, 2005). Thus, the CASA model takes into account relevant student background characteristics to accurately assess the relationship between college-going culture and college-going outcomes.

Attitudinal

CASA's operational definition of the attitudinal component is the student valuation of a college degree and the self-perceived capacity to pursue and complete a college degree. CASA assesses attitudes related to persistence, resilience, and achievement necessary for college enrollment. Sociological concepts on capital critical to college-going and psychological theory on self-efficacy are included in the attitudinal construct: basic awareness of college information, degree of commitment to attaining a college degree, academic motivation, valuation of a college degree, grit, belief in academic potential, confidence in college affordability, and satisfaction in college choice.

The psychological concept of self-efficacy, which is connected to persistence, tenacity, and achievement in school, is central to the CASA attitudinal component. CASA is a more holistic model for assessment of college-going culture, as in this component, we include noncognitive variables that scholars agree should be further examined in the effort to understand factors that influence student college enrollment and persistence (Camara & Kimmek, 2005; Maruyama, 2012; Thomas, Kuncel, & Crede, 2007; Schmitt, 2012). As introduced earlier, social psychological theories on self-efficacy, which is the "belief in one's capabilities to organize and execute courses of action required to produce given attainment," are also critical in attitudinal formation and behavior (Bandura, 1997). Thus, student behaviors are partly determined by the perception of their ability. A recent meta-analysis on psychological and educational literature indicated that the relationship between psychosocial measures like academic self-efficacy and college success is tightly linked (Robbins, Lauver, Le, Davis, Langley, & Carlstrom, 2004). As well, a strong belief in the value of a college degree is an important attitude, and can be found when a student possesses a college-going identity (Farmer-Hinton, 2008). Further, a commitment to pursuing a college degree, or persistence (Tinto, 1993) and (Bean, 1985), resilience or grit

(Duckworth, 2007) and achievement in terms of motivation (Covington, 2000; Eppler & Harju, 1997) have been linked to college access and success. As such, certain beliefs, or attitudes and knowledge, are necessary in behaviors that lead to pursuing college.

Behavioral

The operational definition of the behavioral component for CASA is the level of student engagement in various activities that are conducive to college-going and success. This component calls for the consideration of important behaviors that promote college preparation, including the following: basic academic effort, college search preparation, school attendance, academic effort, co-curricular activities, campus visits, FAFSA completion, writing statement of purposes, college entrance exam preparation, seeking out financial aid and scholarship information, and planning financially for college.

As explicated earlier, behaviors are related to attitudes of self-efficacy. Yet in educational research, certain behaviors have been shown to be linked to greater college enrollment and success. Thus, behaviors are important to include in an assessment, as even though they may be incongruent with attitudes, they may still demonstrate a relationship to desired postsecondary outcomes. In educational research, behaviors that have been linked to greater college enrollment and success, especially for traditionally underrepresented students, include academic effort (Adelman, 1999; Catsiapis, 1987; Tierney et al., 2003), preparation for standardized testing and college entrance exams (Antonio, Venezia, & Kirst, 2004; Deil-Amen & Tevis, 2010), applying for financial aid (Bell, Kenyon-Rowan & Perna, 2009; Zarate & Pachon, 2006), particularly the FAFSA (Johnson, 2008; Roderick et al., 2011), and participation in co-curricular activities (Marsh & Kleitman, 2002; Perna, 2000). Therefore, these key behaviors are incorporated into the CASA conceptual model.

School Level Factors: College-Going Culture

At the school level, our model accounts for structural and perceptual aspects of a high school that influence students' college-going. School effects literature proposes that organizational contexts are critical to understanding how different school environments produce different educational outcomes. Indeed, several researchers have documented the ways that different high schools influence students' postsecondary prospects beyond individual and family characteristics (McDonough, 1998; Hill, 2008; Engberg & Wolniak, 2010; Nuñez & Kim, 2012; Perna, 2000; Perna & Titus, 2005; Roderick et al., 2011). To further explore the impact of high schools on postsecondary access and success, the CASA model incorporates aggregate measures of the environmental, attitudinal, and behavioral components that constitute the school's college-going culture. In particular, the environmental component considers how embedded the notion of college-going is within the norms and expectations of the school's daily operations. The environmental component therefore assesses perceptual aspects of a college-going culture. In contrast, the attitudinal and behavioral components evaluate the peer normative context of the high school college-going culture, capturing the critical aspects of student experience that may also informally influence student postsecondary access and success.

Structural Characteristics

Extant research has identified several structural high school characteristics that influence college-going rates. Subsequently, these factors must not be overlooked when assessing college-going culture. Factors associated with school size matter (e.g. teacher-student and counselor-student ratios) and can influence college-going. Schools with larger teacher-student ratios reduce the likelihood of students enrolling at four-year institutions as compared to two-year institutions (Hill, 2008). Also, the number of counselors at a high school also matter in ensuring students

receive adequate support for their postsecondary aspirations (McDonough, 1997). Other studies

using quantitative data, however, have not found significant effects between teacher-student ratio

enrolling at either two- or four-year institutions (Engberg & Wolniak, 2010; Nuñez & Kim,

2012) or counselor-student ratios. Despite the inconclusive empirical evidence, accounting for

the proportion of teachers and counselors relative to students may affect the overall college-

going culture because these factors may limit interaction between students and these key

institutional representatives in their preparation for college.

In addition, the financial resources or economic capital that a school possesses can

influence many aspects of the learning environment, which in turn can affect students'

postsecondary enrollment patterns. Previous research has frequently measured such financial

advantage through the socioeconomic composition of a high school. The average SES of a high

school is significantly associated with college enrollment at two- and four-year institutions (Hill,

2008; Engberg & Wolniak, 2010) and the effects are more pronounced for four-year enrollments

(Engberg & Wolniak, 2010).   Moreover, the SES of other students at a high school significantly

increases the odds of enrolling at more selective institutions (Klugman, 2012). Conversely,

Latinos who attend schools with larger percentages of students qualifying for free/reduced lunch

are less likely to attend four-year institutions (Nuñez & Kim, 2012). Thus, the influence of a

school's composite SES, a proxy for financial resources, appears to be highly predictive of

college enrollment and should therefore be considered when examining other school level

college-going characteristics.

The availability of a rigorous curriculum is another critical structural aspect of college-

going culture because it can shape students' opportunities to take courses that will help them

prepare for and be eligible to attend four-year institutions (Oakes, 2003). In essence, the presence

of an academically rigorous program represents the amount of human capital at the high school

level (Engberg & Wolniak, 2010). The average number of AP courses offered at a high school

increases students' likelihood of enrolling at four-year colleges and universities (Engberg and

Wolniak, 2010), as well as the chances of enrolling at more selective four-year institutions

(Klugman, 2012). In general, structural characteristics representing a high school's academic

rigor are largely predictive of college enrollment for most students and are therefore a critical

school factor to consider with regards to college-going.

Environmental

Beyond structural characteristics, it is important to evaluate perceptual aspects of a high

school environment that promote college-going, especially as administrators can more readily

control and influence these factors. The environmental component represents the extent to which

college-going is part of a school's ethos. Elements of a strong college-going culture include

frequent communication regarding college, clear expectations, and interactions between students

and teachers (McClafferty et al., 2002). Thus, we propose that this environmental component of

college-going culture can be gauged from multiple perspectives within a high school, namely

teachers, counselors, and students, to more holistically determine to what extent notions related

to college-going form an integral part of a school's norms and expectations.

From the perspective of key institutional agents, it is important to evaluate how school

personnel create an environment that promotes college as a viable option. Teachers are key

players in the development and maintenance of college-going culture, largely based on the

amount of time that they spend with students in an academic day. As such, it is crucial to assess

how involved teachers are in providing academic and social support to students in their

preparation for college (Oakes, 2003). One way to assess such involvement is by asking

teachers directly about the postsecondary expectations they have for students and how engaged

they are in helping students reach their goals (Roderick et al., 2011). In one study, researchers

asked teachers to indicate the extent to which they expected students to go to college, helped

them plan for college, and geared their curriculum to these goals. High teacher involvement in

promoting college-going strongly influenced whether students planned to attend, applied, were

accepted into a four-year college, and if students enrolled at an institution that matched their

academic abilities (Roderick et al., 2011). Overall, these findings suggest that teacher

involvement in college planning form part of a strong college-going culture and should be

assessed given its direct impact on the entire college choice process.

In addition to assessing teacher interactions with students, assessing teacher attitudes

towards college-going is also important when assessing college-going culture (College Board,

2006). According to social cognitive theory, teacher attitudes shape a school's collective

efficacy, an organizational characteristic that represents people's shared belief in their collective

power to produce desired results (Bandura, 1997). Collective efficacy is relevant to

organizational culture because it forms the shared values and belief system in an organization

that shapes its formal and informal practices (Bandura, 1997). The stronger a group perceives its

capability to reach a goal, the more likely they will put the effort towards achieving the goal

(Goddard, Logerfo, & Hoy, 2004). Within education, collective efficacy indeed has a positive

effect on students' academic achievement after controlling for other school characteristics

(Goddard, Logerfo, & Hoy, 2004), which suggests that this organizational property may also

have an influence on college enrollment. While self-efficacy matters at the student level,

assessing collective efficacy is important to consider at the organizational level, especially when

considering how faculty, staff, and administrators develop a college-going culture.

Also, assessing counselor behaviors related to college counseling is also a critical piece in determining a school's college-going culture. Counselors assist students in planning their course plan during high school, which partially determines their eligibility for some colleges and also share information regarding postsecondary opportunities. As such, counselors are integral in creating a school's formal planning for college (McDonough, 1997). High school counseling structures therefore variably influence the postsecondary aspirations and enrollment decisions that students make (McDonough, 1997). However, the comprehensiveness of college counseling differs at every high school and depends on the constraints a high school faces based on state and district policies (Perna, Rowan-Kenyon, Thomas, & Bell, 2008). Given these differences, it is important to assess how counselors interact with students regarding college to assess the college-going culture within a school and the subsequent impacts on student postsecondary enrollment patterns.

Turning over to students, gauging their perceptions of the high school environment as it relates to college planning is an extremely useful indicator of college-going culture. A recent publication calls for the development of more sophisticated surveys to capture student perspectives on their educational experiences (Boser & Rosenthal, 2012). According to national data, student reports of classroom interactions with teachers indicate that they are not very engaged; moreover, clear gaps on levels of engagement emerge between those who are lower income and racial/ethnic minorities as compared to their counterparts (Boser & Rosenthal, 2012). Boser and Rosenthal (2012) posit that these student evaluations are a valid assessment of teacher effectiveness in providing an enriching learning environment and provide valuable data on how these environments can be enhanced to improve student achievement. In a similar fashion, we propose that assessing student perceptions of their high schools are necessary to evaluate

college-going culture. While student perceptions of college-going culture may be limited as they

may not tap into the quality of interactions with teachers and counselors or may not capture

which activities are student or teacher initiated (Roderick et al., 2011), we propose that an

effective college-going culture exists if student views are consistent with a school environment

that supports students to pursue a postsecondary education. Therefore, assessments of student

views are necessary to fully evaluate the effectiveness of a college-going culture and to examine

how their views of the high school environment might influence their college decisions.

Consequently, the CASA model proposes that an evaluation of students' perceived

expectations of teachers and counselors is important in determining future student academic

endeavors. High and clear expectations are critical components of a strong college-going culture

(McClafferty et al., 2002; Oakes, 2003). These expectations particularly matter for students who

are low-income and first in their family to pursue a college education, as the norms for college-

going within a high school can be extremely influential for these students (Farmer-Hinton,

2008). As such, schools can set the expectations and provide the necessary support that low-

income, first generation college-goers need to place college within the realm of realistic

possibility. Asking students directly how much they are challenged by school personnel to take

rigorous course loads, like AP classes, and how much they are encouraged to continue their

education en route to successful careers after high school can provide a glimpse into how infused

high expectations for students are into the norms within a high school. Therefore, by assessing

student perceptions of these expectations, schools can determine if their efforts to increase

college-going culture are indeed perceived by the majority of students and how these perceived

expectations impact college-going.

Furthermore, assessing how aware students are of the college information and resources available at their high school can help school officials determine the effectiveness of school efforts. The way that schools distribute information and resources related to college preparation are highly associated with college enrollment (Hill, 2008). Schools that have substantial resources and widely distribute to students, as well as those that strategically target these resources to fewer students are more likely to enroll at four-year institutions as compared to schools that have low resources and no concerted dissemination efforts. Poorer resourced schools with minimal dissemination plans are also less likely to have their students enroll in two-year institutions (Hill, 2008). Moreover, schools that are well-resourced and intensively distribute information to students are highly influential in promoting four-year enrollment, especially for Latino and African American students (Hill, 2008). Also, for Latino students, aggregated measures of how much they relied on teachers and counselors in providing information like filling out applications mattered for them planning to and actually applying to college (Roderick et al., 2008). Consequently, an evaluation of college-going culture must examine how much students report that their counselors and teachers discuss college information, how frequently deadlines related to the college application process are announced, and how aware they are of the various programs schools offer that further provide resources for their college planning process.

Attitudinal

To assess the peer normative context, CASA proposes utilizing aggregate measures of student attitudes as a main component of a college-going culture. Aggregate measures of student attitudes related to college-going tap into the social and cultural capital among peers within a high school that may influence students' individual efficacy. In fact, Bandura (1997) identifies

peers as proximal examples of efficacious thinking and behavior. Through relationships with peers, students broaden their awareness of their own capabilities (Bandura, 1997), which can in turn affect their goals and behaviors. Thus, aggregate measures of peer self-efficacy as it relates to college-going broaden individual-level notions of college-going identity (Oakes, 2003; Farmer-Hinton, 2008) to consider how much these identities pervade a school and form part of the high school environment. Even within high schools that have high expectations for college-going and available resources, low-income students may still question their abilities to go to college and pursue more competitive institutions (Farmer-Hinton, 2008). Thus, evaluating how pervasive a college-going identity is across a school serves as a valid assessment of college-going culture. Moreover, linking aggregate measures of student attitudes can extend our understanding of how peer attitudes may influence postsecondary enrollment.

Behavioral

CASA further proposes that using aggregated measures of student behaviors also tap into the peer normative context of a school's college-going culture. In fact, aggregated measures of student behaviors are most frequently used to represent college-going culture in quantitative studies, given that these measures represent the social capital of the peer network (Engberg & Wolniak, 2010). Previous research has found strong relationships between aggregate student behaviors in high school and postsecondary enrollment, such as percentage of graduates enrolled in college (Roderick et al., 2011; Nuñez & Kim, 2012; Perna, 2000), percentage of students completing the FAFSA (Roderick et al., 2011), the average level of math-taking (Engberg & Wolniak, 2010), the proportion of students taking the SAT (Johnson, 2008), and the number of students completing more than three college applications (Roderick et al., 2011). However, it is important to acknowledge that these measures do not differentiate whether these behaviors are

created by the high school environment itself or by the characteristics of the students and

families who comprise the school (Roderick et al., 2011). Regardless, these measures are indeed

useful because they assume that past-college going and college preparation rates are influenced

by the resources that schools direct to college counseling, the norms and expectation to enroll in

college after high school, and the academic preparation students have.

In addition to the utility of the aforementioned measures, CASA promotes the inclusion

of additional aggregated behavioral measures to comprehensively assess the peer normative

component of college-going culture. Some of these measures include aggregating the level of

academic effort students put forth in school. Moreover, assessing the extent to which students

utilize resources to aid their college-going should also be considered. For example, asking

students how often they participate in workshops that provide them knowledge and information

about college, how often they meet with their counselor to discuss college, and how frequently

they discuss their college and career goals with their peers are some of the ways in which we can

further tap into the peer norms within a high school that will help us determine which behaviors

most influence college-going.

Implications for Research

The CASA conceptual model provides a useful framework for the design of future

research and assessments examining college-going culture and its influence on postsecondary

enrollment. Previous research demonstrates the influence that some measures representing the

college-going culture of a high school can have on postsecondary enrollment. Some of this

research utilizes national datasets, such as the ELS: 2002 (Educational Longitudinal Study of

2002), while other local assessments have been developed to measure some aspects of a college-

going culture. Several studies have used aggregated measures as proxies of college-going

culture, such as percentage of graduates enrolled in college (Roderick et al., 2011; Nuñez & Kim, 2012; Perna, 2000), percentage of students completing the FAFSA (Roderick et al., 2011), and the number of students completing more than three college applications (Roderick et al., 2011). These behavioral representations of a college-going culture are valuable given that they have been linked with subsequent college enrollment. However, by definition as proxies, these factors do not tap into the qualitative nature of the high school college-going culture, which may more directly influence student attitudes and behaviors that prepare them to become college-ready. As such, the CASA model provides a more comprehensive framework through which college-going culture can be assessed and linked to college enrollment decisions.

While CASA recognizes the value of previously used measures representing college-going cultures, it also promotes the development of additional measures that more comprehensively and accurately evaluate this important high school characteristic. CASA proposes that new aggregate measures must be developed to tap into the college-going environment and the attitudes that students have regarding college. These new measures would enhance our current understanding of not only what constitutes a college-going culture but also empirically examine how environmental aspects, peer attitudes, and peer behaviors impact student postsecondary enrollment.

Implications for Practice

The CASA framework also has several practical implications for high schools in their quest to improve student achievement and to help them address some of the gaps in college access which different populations of their students may face. Through the development of instruments based on the framework, CASA can guide administrators in assessing their current college-going culture, creating benchmarks, and developing initiatives to improve their high
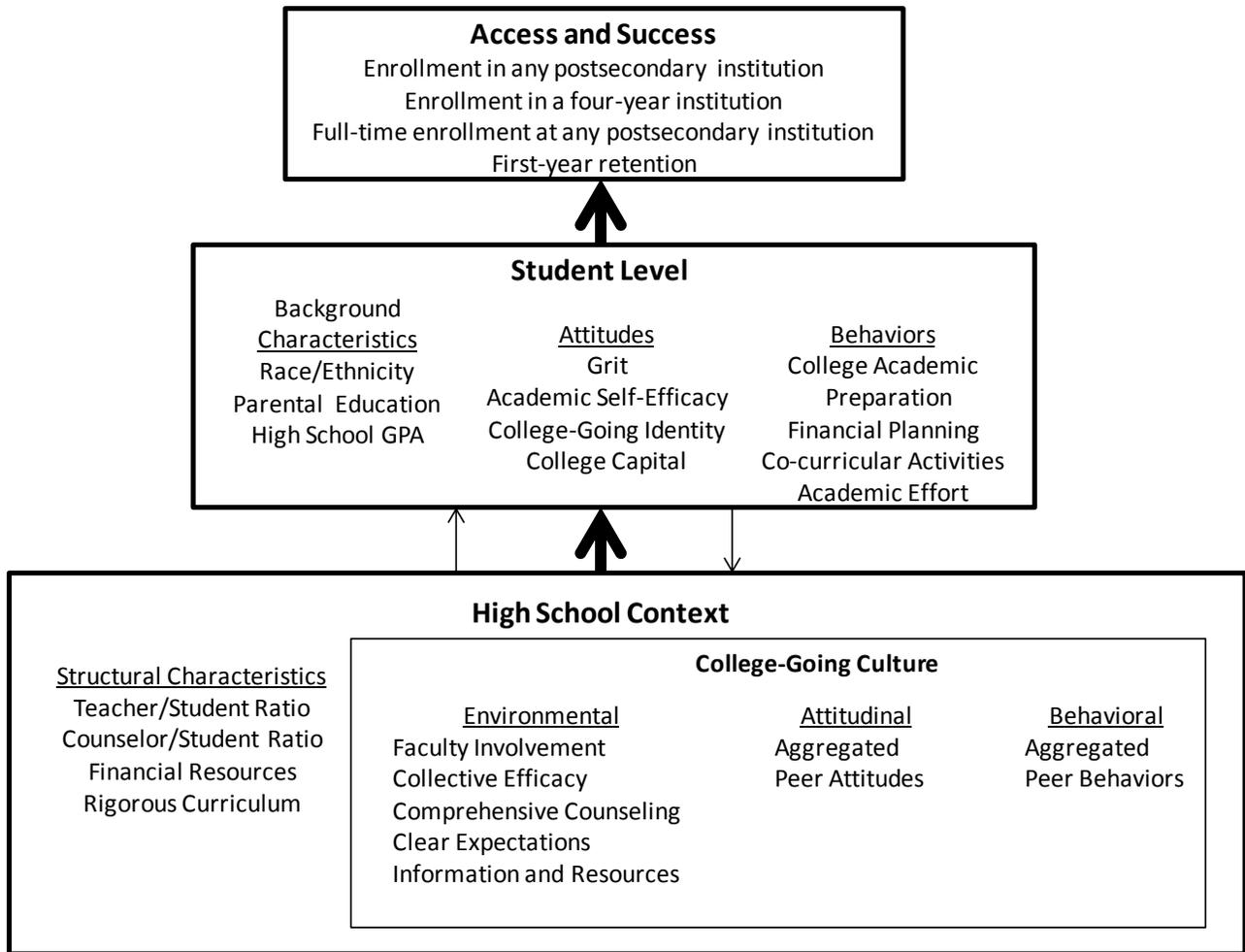
school environment. For example, with the development of surveys evaluating student views of these high school aspects, administrators can more accurately determine the effectiveness of their efforts to increase college-going. Schools can gain additional perspectives and valuable data currently not captured in existing assessments focused primarily on academic achievement. Second, because low-income, first generation, and African American and Latino students often lack critical college knowledge and guidance, they rely most heavily upon their schools for this knowledge and guidance. Thus, an assessment of the high school environment by students provides feedback ensuring that there is alignment between what school leaders and teachers say they are creating, and what students are actually experiencing, especially among students for whom this information is most critical to in accessing a postsecondary education. Third, an assessment of the high school environment provides data to improve that which is directly under the greatest control of the school, and allows for informed decision-making when resources may be scarce. By identifying actual measures that directly impact student outcomes, schools can further efficiently invest in the factors that further increase their students' postsecondary success. Finally, the assessment of college-going culture in conjunction with college-going outcomes is a way for schools to demonstrate their accountability in terms of student achievement. In an era in which postsecondary education is increasingly a prerequisite for a career and socioeconomic mobility, schools may need to look beyond academic performance during high school and graduation. Incorporating an assessment that integrates postsecondary outcomes will help schools look beyond the doors of their institutions to ensure that all students are prepared, guided, and have the opportunity to access higher education.

Conclusion

At the heart of the CASA model are pragmatic concerns for what researchers and school leaders need in order to better assess and improve college-going culture and increase students' postsecondary access and success. By assessing the environmental, attitudinal, and behavioral elements of a college-going culture at the student and high school level, we propose that postsecondary enrollment outcomes can be enhanced. Future research and instruments assessing college-going culture can use the CASA framework to comprehensively consider the many student and school level factors that can strengthen college-going cultures. Using the multifaceted CASA model will help ensure that all students, including traditionally underrepresented students, are included in the efforts to better college-going cultures. It is hoped that this model can spur further research on assessments that increase college-going rates and propel all students towards successful completion of their baccalaureate degrees.

Figure 1

College Access and Success Conceptual Model

Access and Success
Enrollment in any postsecondary institution
Enrollment in a four-year institution
Full-time enrollment at any postsecondary institution
First-year retention

Student Level

Background
Characteristics
Race/Ethnicity
Parental Education
High School GPA

Attitudes
Grit
Academic Self-Efficacy
College-Going Identity
College Capital

Behaviors
College Academic
Preparation
Financial Planning
Co-curricular Activities
Academic Effort

High School Context

Structural Characteristics
Teacher/Student Ratio
Counselor/Student Ratio
Financial Resources
Rigorous Curriculum

College-Going Culture

Environmental
Faculty Involvement
Collective Efficacy
Comprehensive Counseling
Clear Expectations
Information and Resources

Attitudinal
Aggregated
Peer Attitudes

Behavioral
Aggregated
Peer Behaviors

Adapted from Engberg and Wolniak (2010)

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