



PATHWAYS TO POSTSECONDARY SUCCESS

Maximizing Opportunities
for Youth in Poverty

PATHWAYS to Postsecondary Success is a series of mixed-methods studies of the educational pathways of California's lower income youth. Through a series of research briefs and reports, the project aims to advance research on poverty, produce useful tools that improve educational practice, and inform the U.S. policy agenda on the relationship between poverty and education.

Importance of High School Conditions for College Access explores critical factors in preparing students for college. In this brief, Oseguera builds on a widely-used framework to set the stage for an empirical analysis of how school culture interacts with individual experiences to form students' postsecondary pathways.

RESEARCH BRIEF

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Importance of High School Conditions for College Access

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Students from low-income backgrounds are less likely than their peers to enroll in and complete college, thus limiting their employment prospects in a job market that demands increasingly higher skill levels. Often, reform efforts designed to address this problem focus on individual factors such as academic performance or parental education level. But an over-emphasis on student characteristics at the expense of attention to school culture and climate undermines a more complete understanding of student achievement. By exploring high school institutional factors—including academic curriculum, teacher qualifications, and school commitment to college access—we can explain the variation in the postsecondary pathways of students from low-income backgrounds more fully than if we focus only on family or “cultural” factors.² If we overlook what is going on within schools, we may limit the potential impact of current policy initiatives on the academic success of low-income students. A focus on strengthening schools is a more proactive approach to ensuring student success.

Earlier findings on the four-year trajectories of a national cohort of tenth graders illustrate profound differences in the pathways of students from low- and higher-income families and the central role of their high school experiences in preparing them for a range of postsecondary options.³ In previous analyses, only 14% of students raised in poverty completed a college preparatory curriculum when they were in high school, while close to a third (32%) of students whose families were not in poverty did so. A majority (57%) of lower-income students who finished high school without completing this type of curriculum pursued postsecondary education at the two-year level; just 34% enrolled in four-year institutions. In contrast, lower-income students who had completed an academic concentrator curriculum were more likely to enroll in four-year schools (75%) than in two-year colleges (23%). Higher-income students, on the other hand, largely entered four-year colleges and universities, whether they had (84%) or had not (49%) completed an academic concentrator curriculum. This previously published research is a stark reminder of the importance of school conditions in determining the obstacles that students face as they prepare for post-high school education and a range of career options.

This research brief builds on the earlier descriptive analyses to inform future empirical work on the specific school conditions that correlate with high levels

Adapted Model of Oakes' Seven Critical Conditions For Equity

HIGH-QUALITY ACADEMIC INSTRUCTION

- **Rigorous academic curriculum** to give students the skills, knowledge, and credits to enter and succeed in college.
- **Qualified teachers** who engage students in intellectually challenging work and bridge home cultures with school requirements.
- **Safe and adequate school facilities** so that students and teachers can devote their energies to learning and teaching.

SCHOOL-BASED COMMITMENT TO COLLEGE ACCESS

- **A college-going school culture** characterized by high expectations, rigorous instruction, and other formalized supports.
- **Intensive academic and social supports** that enable students to negotiate the academic pipeline.

SHARED RESPONSIBILITY FOR COLLEGE ACCESS AND CHOICE

- **Opportunities to develop a multicultural college-going identity** that provides confidence and skills without asking students to sacrifice who they are.
- **Family-neighborhood-school connections** that recognize all three as valuable resources for students.

of college enrollment. Specifically, I examine a set of school-level factors that help explain the striking divergences. I use a conceptual framework developed by Jeannie Oakes, who identified seven critical conditions in our nation's high schools for creating equity in access to college.⁴ Oakes' seven key conditions can be categorized into three clusters around *high-quality instruction*, a *school-based commitment* to college access, and a *shared responsibility* for college access and choice.

Elements of Oakes' seven conditions have been empirically established in the literature, but they have not previously been combined into a comprehensive portrait. Moreover, they have not yet been operationalized using a nationally representative database, something that would allow us to further untangle which school-level variables in particular most limit or expand college access for low-income students—a population that continues to be understudied.⁵ Thus, I draw from a wide range of disciplines (e.g., sociology, economics, and education) and subject areas (e.g., educational policy, college access and choice, and high-school performance) to describe the current evidence in the empirical literature that links these seven critical conditions to college-going among all students, regardless of socioeconomic background.

With an eye toward a more comprehensive analysis of Oakes' framework, I also identify measures in the Education Longitudinal Study (ELS)—an ongoing, multilevel study conducted by the National Center for Education Statistics—that conceptually fit under each condition. These measures can be used to assess quantitatively whether the seven conditions exist in particular high schools and how they collectively and individually affect students' postsecondary pathways.

Ultimately, I establish that there is substantial empirical evidence to use Oakes' school conditions framework as a foundation for understanding college-going. It is also clear that a quantitative test of the existence and impact of these school conditions is warranted and necessary in order to more fully understand school context and to enable schools to effectively develop and support students' college aspirations and to prepare them—academically and otherwise—for a range of postsecondary options.

High-Quality Academic Instruction

An effective school environment is perhaps the most basic ingredient in the preparation of students for their postsecondary pathways. An effective school must offer a rigorous academic curriculum, employ qualified teachers, and be housed in a safe and adequate facility. The value of these three conditions is strongly supported in the literature.

Rigorous Academic Curriculum

Advanced courses not only foster academic achievement, they are a precondition to college admission. As Oakes notes, exposure to high-level academic classes, including algebra in middle school and college preparatory and Advanced Placement (AP) courses in high school, creates an environment of achievement that leads to desirable academic outcomes for all students.

***Early exposure to algebra significantly increases achievement.*⁶**

Controlling for academic ability, students taking algebra by the eighth grade score higher on the SAT I and are more likely to attend college and remain in a mathematics pathway when compared to their peers who take algebra later or not at all. Both district- and national-level data indicate that all students realize achievement gains through instruction in algebra. If students are provided with opportunities to enroll in this gateway course, their likelihood of attending college increases.

***Students' ability to access AP courses reflects a school's commitment to college-going.*⁷**

Scholars have observed a positive relationship between the rigor of students' academic coursework in high school and their movement through college. Specifically, the presence of AP courses indicates a school's curricular intensity and allows students to earn college credit while in high school, moving them closer to achieving postsecondary degrees. The College Board identified a positive correlation between AP coursework and higher grades once students enroll in college.

Schools serving low-income students offer fewer AP courses than schools serving more affluent communities. Importantly, expanding AP coursework does signal a commitment to college-going, but studies have documented that additional access does not ensure students are prepared to succeed in these courses, or that teachers are sufficiently qualified to teach them. Thus, it is not simply a matter of quantity, but also of quality.

Qualified Teachers

As Oakes notes, all students deserve teachers who are “knowledgeable, experienced, and fully certified,” largely because they are more capable of “teaching [that] makes knowledge accessible to students from diverse backgrounds.”⁸ Thus, this section summarizes current literature that relates teachers' subject knowledge, experience, and certification to students' academic achievement. While the literature demonstrates a correlation between teacher qualifications, a rigorous academic curriculum, and college access, it also shows a connection between school conditions and teacher quality. Specifically, safe and adequate school facilities make it easier to recruit and retain the qualified teachers that Oakes notes are critical to college attendance.

***Teacher knowledge and experience are associated with student achievement.*⁹**

Empirical research often suggests a relationship between teachers' subject knowledge, the depth of their subject area instruction in undergraduate and graduate degree programs, and student achievement. However, a meta-analysis of studies documenting various teacher educational improvement initiatives points to the difficulty in establishing which aspects of these initiatives lead to improved teaching practices. In other words, these factors matter, but their precise impact is difficult to measure because they are often conflated with other factors. Nonetheless, the association between teacher experience and student achievement is consistently borne out.

***The association between teacher certification and student achievement is not clear.*¹⁰**

Well-resourced schools are better able to attract certified teachers—a finding repeatedly documented in analyses of national datasets. There is no clear consensus, however, regarding the role of teacher certification in student achievement. Nevertheless, certification reflects, at minimum, that a teaching professional has secured adequate training to be present in the classroom. As such, it is a critical public policy issue and I include it as a component of Oakes' conditions.

Safe and Adequate School Facilities

Oakes defines safe and adequate school facilities as “schools that are free of overcrowding, violence, unsafe and unsanitary conditions, and other features of school climates that diminish achievement and access to college.”¹¹ The majority of the literature in this area describes the impact of safe and adequate school facilities on short-term student performance, and that is therefore my focus here.

*Smaller class size is related to higher student achievement, although recent evidence points to a lack of consensus on this issue.*¹²

Insights from educational psychology indicate that deviations from optimal learning environments, including those related to class size, produce negative results. Indeed, there is some evidence to suggest a connection between class size and student achievement at a range of grade levels. Although a recent California study showed no achievement improvements related to class size reduction, many scholars continue to advocate for smaller classes to facilitate greater student-teacher contact and for its connection to other outcomes such as increased college enrollment—a key focus of this work.

*School violence suppresses student achievement.*¹³

The relationship between schooling and violence has received considerable attention in the literature, especially in recent years. Studies confirm Oakes’ claim that school violence has a suppressive effect on achievement. School-based violence—as defined by student perceptions of safety in and around school, and of substance use among school peers—is associated with a reduction in standardized test scores for pre-secondary school students. Students who report being frequently harassed have a grade point average approximately one half-letter grade lower than students who have not been harassed. And 10th graders who have been victims of violent acts are likely to be less engaged in school and they perform at lower levels than their peers. Other studies have linked the threat of violence in the community to depressed achievement.

*A school’s physical environment influences student learning.*¹⁴

Though the quality of school facilities may seem qualitatively different from school crowding and violence, Oakes suggests its centrality to college-going in part because of its obvious connections to other elements of safe and adequate schooling. For example, older buildings are more common in school districts that cannot afford to build newer, larger facilities or maintain low teacher-to-student ratios, resulting in school crowding. Some scholars also argue that well-maintained school buildings perform a critical role in the creation of student and faculty morale. More directly, however, a significant body of literature suggests that a school’s physical environment influences student learning. In district and statewide studies, there is a consistent relationship between the quality of the building—as measured by items ranging from leaky roofs and poor flooring—and the availability of technology and internet/intranet utilization and student achievement.

School-Based Commitment to College Access

Oakes suggests that a sustained school-based commitment to college attendance for all students is linked to two key things: a college-going school culture and academic and social support. First, as students form college aspirations and connect those aspirations to concrete strategies necessary for success, they need “teachers, administrators, parents, and students [who] expect students to have all the experiences they need for high achievement and college preparation.” This will lead students to “believe that college is for them.”¹⁵ Thus, I review literature related to the effects of others’ expectations on students’ college aspirations and attendance. The suggestion is that adults’ expectations create an environment conducive to college attendance, and hence, foster a college-going culture.

Second, Oakes claims a college-going school culture is one that provides intensive academic and social supports. She defines these as the “networks of adults and peers who help access tutors, material resources, counseling services, summer academic programs, SAT prep, coaching about college admission and financial aid, and other timely

assistance.”¹⁶ Broadly speaking, these headings can be subsumed under three categories related to: (1) additional academic support and programs like Talent Search, GEAR UP, and Upward Bound;¹⁷ (2) co-curricular resources indirectly associated with college attendance; (3) and high-quality college counseling and test preparation programs.

College-Going School Culture

A high school with a college-going culture embodies expectations and provides resources that ensure that students are prepared for a full range of postsecondary options when they graduate. This culture is created by a network of people who reinforce the importance and possibility of college for all students. Although there are some studies on this topic, they are less conclusive than other bodies of work. Nevertheless, recent research does offer evidence that high schools with a college-going culture broaden access to college for their students. This type of culture relies on the contributions of school personnel, family, and social networks.

Students’ aspirations may be influenced by the expectations that others hold for them.¹⁸

Research has long linked teacher expectations and student academic *achievement*, but the literature is less explicit concerning the role of teachers in fostering students’ college *aspirations*. While some studies suggest negative teacher expectations have a persistent negative effect on student aspirations to attend college, others indicate the effect can be mitigated by a range of influences, including the intercession of other school personnel. Claims concerning the importance of surrounding students with a network of supportive adults are reinforced in the sociological literature, which indicates a critical factor in college attendance is the combined influence of other individuals who are significant in students’ lives.

Family knowledge of college-going affects students’ college attendance.¹⁹

Scholars have suggested important linkages between a family’s knowledge related to preparing for and attending college and a student’s eventual college enrollment; specifically, when they are informed about the benefits of college attendance and about financial aid, and when they know

others who have attended and succeeded in college, families can help students transition from aspiring to attend college to actually enrolling. Likewise, some studies that highlight the importance of parental expectations in predicting students’ college aspirations—and note that schools and teachers should acknowledge and build upon these expectations—also indicate that the effects may be tempered if parents have limited knowledge of postsecondary education.

Extended social networks may play a role in fostering students’ college aspirations.²⁰

Some scholars expand the concept of family to include peers, key school personnel, or other agents who help in the college process by shaping students’ knowledge about the value of educational attainment. Students who have families with limited college knowledge or resources often rely on schools to provide “navigational capital.”²¹ Moreover, many types of cultural knowledge often thought to be unrelated to college attendance—including language maintenance or the ability to code switch between mainstream and non-dominant cultures—might in fact play an important role in fostering college aspirations.

Intensive Academic and Social Supports

To test the applicability of Oakes’ claim that intensive academic and social supports encourage students to attend college, I sought evidence of the effects of programs in support of academic achievement, co-curricular resources for students, and high-quality college counseling and test preparation programs.

Academic support programs foster higher levels of college attendance and completion.²²

Programs designed to accelerate acclimation to college-level work and raise expectations of gifted students have a long history and can be clearly linked to gains in academic achievement. Many see these programs as an important means of cultivating college aspirations and promoting equality of access, though they are also often critiqued for failing to redress stratification in access because they reify distinctions between high- and low-achieving students. Nonetheless,

they have been evaluated with randomized controlled trials that demonstrate they have a positive influence on college attendance and completion.

Based on these programs' success, other initiatives designed specifically for low-income, minority, and possible first-generation college students are increasingly being adopted. For example, programs like GEAR UP represent critical partnerships between high schools and colleges and are designed to foster equity of access. Policy briefs have demonstrated the success of GEAR UP in raising both college aspirations and eventual college attendance. Similar effects have been observed for Upward Bound.²³

Participation in afterschool activities predicts college attendance.²⁴

It is broadly assumed that, within a framework of holistic college admissions, the ability to participate in afterschool athletic, music, and academic programs matters a great deal. We know participation in extra- and co-curricular activities is predictive of college persistence and success, and also that the ability to participate in these activities is conditional on family income background. These findings hold true at the high school level as well, and serve to predict college attendance.

Although access to college counseling is associated with college attendance, most low-income students do not receive it.²⁵

College counseling represents an important means by which students accumulate the knowledge and relationships associated with college attendance. Unfortunately, those most in need may be the least likely to receive it, because counselors at under-resourced schools often have caseloads as high as three times the recommended number. Scholars find access to counselors via program participation improves the odds of college attendance for all students, regardless of family income level—in fact, those in poverty experience the greatest gains. Such programs are likely providing students with much needed information, skills, and relationships that are valued in the college-going process. This cultural capital helps them to navigate under-resourced school environments.

Standardized test preparation indirectly predicts college enrollment, yet low-income students tend not to access supplemental services.²⁶

Students from lower-income backgrounds are less likely than their more affluent peers to have access to programs designed to prepare them for college entrance examinations. Though test preparation programs have been shown to have a minimal effect on actual test scores, they are nonetheless reflective of the larger deployment of resources to support students' college attendance. Unfortunately, statistical analyses of students' test performance typically focus on family background and formal schooling processes and generally do not consider the contribution of private coaching, tutoring, test-preparation classes, sitting for practice exams, etc. These educational activities outside of school may help to explain persistent gaps in test scores and subsequent achievement of test-takers—gaps that lead to increased advantages in the college application process. In other words, family income background can work indirectly through a family's ability (or inability) to purchase more expensive educational supports for its children.

Shared Responsibility for College Access and Choice

The development of a shared responsibility for college access and choice depends on two opportunities: (1) for each student to develop what Oakes calls a “multicultural college-going identity” and (2) for connections between the student's family, neighborhood, and school to foster college attendance.

Developing a Multicultural College-Going Identity

According to Oakes, a multicultural college-going identity develops when “students see college-going as integral to their identities.” She suggests this comes about when students acquire the “confidence and skills to negotiate college without sacrificing their own identity and connections with their home communities.”²⁷ In line with this definition, I review literature on cultural agents, socialization, and culturally relevant pedagogy.

***Early, ongoing socialization fosters the success of minority students.*²⁸**

The vital role of socialization (i.e., the process of acquiring norms, skills, values, and behaviors) in college-going and college success has long been recognized. In the past, this recognition has led researchers to focus on students' integration into collegiate norms *after* admission. But more recent work has suggested socialization is an ongoing process that begins *before* college and continues throughout its duration. The normative college-going experience includes socialization with individuals who have attended college and who can share college experiences with prospective college attendees. Students whose high school experiences do not include this "anticipatory socialization" struggle to adapt to the college environment.

Some scholars suggest that cultural agents—individuals capable of translating institutional mores into a student's home culture—represent a viable means of fostering minority student success. Studies have also demonstrated the importance of students' ability to see themselves in the college context through the success of others from similar backgrounds. Furthermore, recent socialization research suggests myriad influences (e.g., familial, occupational, organizational) play a role in the creation of a multicultural college-going identity.

***Culturally relevant pedagogy fosters student achievement.*²⁹**

Broadly speaking, culturally relevant pedagogy is rooted in the notion that better teaching and learning occurs when, regardless of the racial or ethnic composition of a classroom, students and teachers see themselves in the curriculum. Students whose racial and ethnic identities are affirmed in the classroom are more likely to achieve academically than similarly academically qualified students who do not receive these messages. Conversely, where culturally competent faculty and staff are lacking and representation of positive racial/ethnic contributions in curriculum and marketing materials is limited, students may experience a sense of isolation (although investigators have identified "protective factors" and conditions that appear to alleviate the risk

of student failure due to discrimination, feeling unwelcomed in school, and limited access to important adults). Such key relationships help promote acculturation styles that moderate the effects of racial segregation, economic marginality, and institutionalized racism.

Connections Among Families, Neighborhoods, and Schools Around College-Going

As Oakes explains, families, neighborhoods, and schools must "work together to ensure that all families have access to essential knowledge of college preparation, admission, and financial aid."³⁰ With this in mind, I review recent literature that explores conceptualizations of community resources as aspects of the college-going process.

***Many forms of cultural capital can enable students to navigate pathways to college.*³¹**

Cultural capital generally represents the knowledge and values of a community's dominant class. Variations in cultural capital represent not deficits to be rectified, but opportunities for understanding the world differently. Research shows that students find alternative pathways to college and can rely on the support of family members who may not possess the forms of cultural capital typically associated with college-going. Perhaps most importantly, these findings suggest the need to transcend deficit models of college choice to include a broader definition of what counts as capital to capture behaviors and experiences not noted in more traditional definitions of capital. Some examples would be the ability to navigate complicated educational systems in a non-linear fashion or expanding ideas that college only represents residential four-year campuses.

***Low-income parents may not be able to provide the necessary resources to enable students to pursue further education, so communities and schools become even more important in the process.*³²**

Recent college attendance literature that focuses on the experiences of students of color has embraced an alternative, broader conceptualization of community resources. Some scholars find that lower-income families actively

encourage their children to complete their college education, even when they themselves lack the knowledge necessary within the dominant cultural framework to help their children successfully transition into postsecondary opportunities. They rely instead on other parents and families, interacting in schools, churches, and their communities, to gather and share important college knowledge.

ELS Variables Associated with Oakes' Critical Conditions for Equity

An important next step is quantitative assessment to determine whether Oakes' seven conditions exist in particular high schools, and how they collectively and individually affect students' postsecondary pathways. The Education Longitudinal Study (ELS), conducted by the National Center for Education Statistics (NCES), follows a national sample of youth as they transition from high school into work and college. In 2002, the NCES surveyed 14,000 United States tenth graders attending public, religious, and private high schools. These same respondents were surveyed again in 2004, and for a third time in 2006. Their responses are weighted to represent the population of tenth graders nationally.³³

The ELS contains a range of variables that measure the extent to which students have access to and partake in the seven critical conditions described in this brief. It is a multilevel study that collects information from students and their parents, as well as the students' high school teachers and administrators. **Table 1** summarizes specific variables that lend themselves well to an analysis of how these conditions do or do not contribute to postsecondary success for lower-income students.

Conclusion and Next Steps in the Research

Through an integrative literature review, I have described sound support for the seven critical high school conditions described by Oakes; together they represent key school-level factors that can facilitate students' transitions to college. The scholarly inquiry that has emerged in the decade since Oakes first proposed this framework supports the assertion that this is a valid foundation for broad-scale, quantitative analysis that could change the focus of policy and practice in this area.

With an eye toward expanded inquiry into how the factors in Oakes' model may collectively influence actual student college enrollment behavior, I have identified measures in the Education Longitudinal Survey that correspond to each of the seven conditions. This framework will allow researchers to begin to integrate the insights of qualitative researchers and educational theorists with the quantitative methods and empirical data presently favored by foundations and policymakers. Research that utilizes a model that focuses on schools and communities—social organizations that can be readily targeted for policy and funding interventions—has greater potential to shape policies that can improve the educational achievement of low-income students.

While extensive research has been conducted on college access, few studies have offered empirical analyses of a comprehensive framework focused specifically on what happens within secondary classrooms and schools. An evaluation of whether the ELS measures identified in Table 1 operate similarly for lower- and higher-income students will reveal whether some conditions have a stronger effect than others on the college-going behaviors of youth who have grown up in poverty. Such data will allow for the refinement of the conceptual model and guide future work in this area. They will also enable policymakers and program designers to determine where to focus their efforts in order to improve the college preparation and enrollment of low-income students.

Table 1
Selected ELS Variables That Measure Critical Conditions for Success

Variable	Rationale for Inclusion
HIGH-QUALITY INSTRUCTION	
Rigorous Academic Curriculum	
Student's 10 th grade curricular track (academic or vocational)	Formal measures of student abilities may predict students' college pathways, as they determine the types of colleges they are eligible for and whether to apply.
Student's 10 th grade mathematics test score	
Student's 10 th grade reading test score	
Student's 10 th grade academic coursework GPA	
Student's 9 th –12 th grade academic coursework GPA	
Student's 10 th grade self-report of ever taking AP course	
Teacher opinion that student works hard (opinion about individual student & aggregate for all students in the school)	Teachers can shed light on levels of student engagement with the curriculum.
Qualified Teachers	
Percent of full-time teachers who are certified	Teachers' training and certification suggest their ability to deliver content effectively and to students of diverse backgrounds. Likewise, their engagement with students can affect student achievement.
Percent of full-time teachers who teach out of their fields	
Counselor opinion of teacher quality (% of counselors rating them "good" or "excellent")	
Student-faculty ratio	
Parent agreement that teachers are well-trained (opinion of student's own parent & aggregate for all parents of students in the school)	
Teachers' interest in students (opinion of individual student & aggregate for all students in the school)	
Safe & Adequate School Facilities	
Parent opinion of school safety (opinion of individual parent & aggregate for all parents in the school)	Feeling safe and comfortable in school can contribute to students' ability to learn, which affects postsecondary pathways.
Counselor opinion about whether problematic learning environment exists	
Counselor opinion about whether school has poor buildings/lack of space	
Student opinion of school climate (opinion of individual student & aggregate for all students in the school)	
SCHOOL-BASED COMMITMENT	
College-Going School Culture	
Student educational aspirations, ranging from high school to graduate school (opinion of individual student & aggregate for all students in the school)	Students' and parents' expectations about educational attainment, as well as peers' opinions and behaviors, may determine how far students actually go. Likewise, a school's focus on college preparatory coursework is indicative of its focus on college-going.
Parent educational expectations for student, ranging from high school to graduate school (opinion of individual parent & aggregate for all parents in the school)	
Student perception of degree to which friends value education (opinion of individual student & aggregate for all students in the school)	
Number of student's friends going to two-year or four-year colleges (for individual student & aggregate for all students in the school)	
Percent of student body in AP courses	
Percent of 10 th graders in college preparatory program	

Intensive Academic and Social Supports	
Counselor perception of whether school has good learning morale	The degree to which students are afforded a space conducive to rigorous learning may affect college-going. Likewise, teachers' expectations of students and parent expectations (as evidenced by their levels of involvement, support, and planning) can also influence college-going.
Student opinion that teachers expect success (opinion of individual student & aggregate for all students in the school)	
Parent report of how often they check homework (report from individual parent & aggregate for all parents in the school)	
Parent report of how often they discuss school with student (report from individual parent & aggregate for all parents in the school)	
Student report of how often parents check homework (report from individual student & aggregate for all students in the school)	
Student report of parent expectations for success (report from individual student & aggregate for all students in the school)	
Student report of frequency of parent discussion of school with them (report from individual student & aggregate for all students in the school)	
Parent report of saving for college (report from individual parent & aggregate for all parents in the school)	
SHARED RESPONSIBILITY	
Multicultural College-Going Identity	
Percent of full-time teachers of each racial/ethnic identity	A school whose teachers reflect the student body may have greater student success.
Percent minority enrollment in ethnic/cultural programs	A school's success in fostering amicable racial and ethnic relations may help students succeed. Similarly, when students with higher levels of altruism, they may have greater academic success.
Student perception that different racial/ethnic groups get along (report from individual student & aggregate for all students in the school)	
Student opinion of importance of working to help others (report from individual student & aggregate for all students in the school)	
Family-Neighborhood-School Connections	
Parent report of frequency of parent/school communication (report from individual parent & aggregate for all parents in the school)	Schools that have strong relationships with students' families may have greater student success. Frequent family/school communication, parent agency, and parent participation can all build these relationships.
Parent opinion that parents have say in school policy (report from individual parent & aggregate for all parents in the school)	
Parent report of participation in school organizations (report from individual parent & aggregate for all parents in the school)	

RESOURCE GUIDE

Key Studies Establishing Oakes' Critical Conditions

This Resource Guide lists key citations for each of the seven critical conditions identified by Oakes. These sources—all published after 2003, when Oakes issued her seminal document—provide quantitative evidence of the conditions being operationalized. For a more complete list of sources please see the endnotes included for each section of the brief, which collectively identify all of the studies summarized throughout the document.

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