

Improving College Readiness

Leveraging Research to Inform Practice

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The increasing importance of a college degree has led policymakers and educators to focus on strengthening the path to college beyond college entry. In this research brief the authors review four factors key to educational attainment: (1) aspirations and beliefs, (2) academic preparation, (3) knowledge and information, and (4) fortitude and resilience. This brief also highlights the ways in which these are reflected in practice and discusses steps that schools might consider given their role in developing students' skills and dispositions for successfully navigating the pathways to and through college.

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Introduction

As the importance of a college degree for both individual and societal economic prosperity has never been greater, policymakers and educators are focused on strengthening the path to college beyond college entry. In California, statewide efforts include the adoption of the Common Core State Standards in 2010, implementation of the California Assessment of Student Performance and Progress (CAASPP) in the 2014-15 school year, and introduction of the California School Dashboard in 2017. These policy efforts in turn shape those in schools, which play a critical role in supporting students' college readiness. As college success is a result of a complex set of both individual- and system-level factors, many of which are malleable, schools, in particular, are at the forefront of students' development for postsecondary success.

In this brief we highlight the most important predictors of educational attainment, which include: (1) aspirations and beliefs (believing college is possible), (2) academic preparation (developing the academic skills to complete college-level work), (3) knowledge and information (having the necessary information to make key decisions around college enrollment and persistence), and (4) fortitude and resilience (skills necessary for navigating complex college processes and persisting through challenges). We provide a short review of the literature in each of these areas (with a more complete review provided in our full report). We also consider the implications for schools in their efforts to support students in developing the skills and dispositions necessary for successfully navigating the pathways to and through college.

Key Predictors of Educational Attainment

Aspirations and Beliefs

Students' aspirations and beliefs are an important predictor of their attitudes and behavior in school as well as their later educational success. Based on personal beliefs, motivation, and identity, and influenced by social norms and one's school environment, aspirations positively impact students' perceptions of their potential for future success and, consequently, the efforts students apply to their academics. Social psychologists have long demonstrated that students' beliefs about their abilities to succeed are related to their effort, and individuals' mindsets and sense of self-efficacy (the belief they have about their abilities to influence the outcomes of their lives) are key to how much effort and persistence students will expend on challenging or unpredictable situations.

Importantly, students' individual dispositions about their educational success are malleable, and research demonstrates that accentuating growth rather than shortfalls

and affirming one's values enhances self-efficacy, aspirations, and performance. Studies also show that individual identity and social contexts matter. As such, schools can play an important part in facilitating an environment where college aspirations flourish, growth mindset is nourished, and self-efficacy is fostered.

Academic Preparation

Preparation for the academic demands of college is the most important factor for college success, as students able to access a rigorous course of study and demonstrate higher levels of performance in high school (as measured by course grades or Advanced Placement, or AP, exam scores) also tend to have better postsecondary and labor market outcomes. A sizable body of research demonstrates that increased curricular intensity and academic rigor in high school is associated with the following: likelihood of high school graduation, performance on college admissions tests, college enrollment, likelihood of bypassing remediation in college, college grades, college graduation, and wages. However, not all students have access to a rigorous course of study, as schools serving high concentrations of low-income students often have fewer advanced curricular offerings than schools serving a more affluent student population. Additionally, tracking or other forms of unequal access can lead to course-taking disparities among students enrolled in the same school. Moreover, the learning environment and content of courses with the same title may vary greatly.

Curricular pathways are shaped by both individual choices and the opportunities available to students. While students typically self-select (often with the aid of parents, teachers, or counselors) into a course of study, many structural dimensions constrain this choice and can result in self-perpetuating educational pathways. As such, educators must seek ways to not only eliminate barriers to the course selection process, but also extend offerings to students from all backgrounds. Additionally, educators must ensure there are equal opportunities for students to enroll in advanced-level courses (e.g., the Expository Reading and Writing Course, advanced mathematics, honors, and AP) by closely investigating the processes that contribute to sorting. Educators must also make certain that coursework is consistently rigorous and that all students are held to high expectations.

Knowledge and Information

Information is also an important determinant of students' educational pathways, as high school students use information from multiple sources to make numerous decisions about the college-going process. Research on the role of social capital has established the importance of students' social ties (e.g., relationships with peers, teachers and counselors, immediate and extended family members) for the development of college-going attitudes and behaviors, as well as access to information for a successful transition

into and persistence through college. Additionally, achievement on state assessments and course grades, along with exposure to college experiences while in high school, provide students with critical information about their academic readiness. Students must then navigate the pathways to college, where quality information about the steps necessary to apply and enroll (e.g., entrance exams, applications, choosing a college) can improve students' educational attainment. Moreover, information also plays an important role in financial aid awareness and take-up. Even after being admitted to college, informational barriers during the summer months between high school graduation and college can also keep a substantial number of students from enrolling in their first semester. Importantly, lack of access to accurate and comprehensible information is particularly difficult for low-income and first-generation college students, whose parents may not have the knowledge and experience to help navigate the numerous decisions and actions required.

Increasing access to and improving the quality of information about college pathways is therefore an important way educators can break the self-perpetuating nature of educational inequality. Interventions aimed at reducing these information barriers show real promise, with school counselors playing a critical role. Building on the importance of academic preparation, a key source of information about academic readiness for college can be obtained from exposure to college experiences while in high school, emphasizing the need for schools to ensure equal access to college readiness coursework. Additionally, schools may collaborate with "bridge" programs (e.g., AVID, Talent Search, Upward Bound, GEAR UP) that provide high school students with preparation and information for the transition into college. School personnel, specifically counselors, are thus essential to helping students traverse information barriers by providing access to accurate and comprehensible information on college application, choice, enrollment, financial aid, and the transition from high school to college.

Fortitude and Resilience

In addition to aspirations, academic preparation, and information, social-emotional competencies and life-management skills are key to success in college. Numerous frameworks within the field attempt to define and organize these "noncognitive" or "soft" skills; however, it is difficult to isolate the effects of the skills specific to resilience and fortitude from the aspirations, beliefs, and academic preparation already discussed largely due to their complex and overlapping nature. Moreover, the research base is decidedly thin on how to accurately measure these constructs and effectively strengthen them in young people. As identifying and measuring these skills is not easy, proxies such as attendance and homework time are often used in research efforts. Daily attendance requires motivation, determination, self-regulation, and sometimes grit and tenacity. Similarly, homework time is used as a proxy for metacognitive strategies and organization

of time and resources; students must dedicate time, structure the use of that time, set priorities, and determine the relative importance of various tasks as they practice academic skills and solidify content knowledge while they engage in homework. Notwithstanding these challenges, scholars have established a positive relationship between academic performance and metacognition, self-regulation strategies, self-control, and conscientiousness. Recent research has also demonstrated a relationship between grit and academic performance.

Given how these skills interact with aspirations, academic preparation, and college knowledge, the most promising ways to develop them are through authentic pre-collegiate experiences, such as college credit courses (e.g., AP, IB, dual enrollment), early college high schools, capstone projects, internships, and apprenticeships. By providing these opportunities, schools can help students cultivate learning strategies, set goals, and learn time management in a higher level context. Additionally, by providing authentic pre-collegiate experiences schools support students' development of social-emotional competencies and self-management skills.

Identifying Key Markers Along Students' K-12 Educational Trajectories

As college readiness is a dynamic process involving choices, actions, and beliefs, often bounded by structural constraints in opportunities at the school level, there is much for schools to consider in developing students' skills and dispositions for successfully navigating the pathways to and through college. Researchers and practice-based organizations alike have developed frameworks and models for organizing these essential dispositions and skills for college readiness, with some providing a comprehensive set of indicators from which to gather data, set improvement targets, and monitor progress. One example of this at the state level is the new California School Dashboard, an accountability system that uses multiple indicators, such as college/career preparedness, high school graduation rates, and chronic absence rates to measure school-level performance through a combination of current performance and change over time. Notably, the Dashboard also includes the College/Career Indicator (CCI) as the primary indicator of school quality for college preparation. The CCI is determined at the school level and is based on the proportion of students deemed to be *Prepared* for college and career based on several academic indicators, including their 11th grade ELA and math Smarter Balanced assessment scores, A-G course completion, scores on any AP or IB exams, and career technical education pathway completion, among others. While the Dashboard, including the CCI, is not designed to be a student-level indicator of college readiness for use by students and parents, district leaders across the state affirm that the school-level indicators inform school-based practices, such as academic course offerings and college guidance.

Given the role schools play in students' futures, school districts might consider developing, adopting, or adapting frameworks that include a variety of measures to capture the complexity of factors discussed in this brief that support college enrollment and completion. These include fostering an affirmative college-going culture, strengthening academic preparation, providing students with more and better information about college, and cultivating stronger resilience for when students enter college. Importantly, schools that monitor student-level indicators and intervene early have been found to improve academic behavior. However, the existence of data or a progress monitoring system alone is not enough. In fact, research suggests both systematic monitoring of data and professional collaboration around data-driven decision making are necessary to improve outcomes.

Conclusion

There is still much to learn about the role of schools in improving students' transition to college. Why haven't nearly universal college aspirations lead to improved college outcomes? How might schools and classrooms be better organized to facilitate increased access to rigorous pre-collegiate academic experiences? What are effective models of college advising, given the limited resources for school counselors? How can schools foster the type of resiliency required for longer-term postsecondary persistence and degree completion, and what are the key markers for these constructs in students' educational trajectories? Answers to these questions are critical if we are to realize the college aspirations and support the future career and economic success of today's youth.

Endnotes

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- ² This brief synthesizes our review of hundreds of research articles related to college success. As such, there are too many references to list in this brief format. However, a comprehensive list of references for the research summarized can be found in the full research summary available at: <https://edpolicyinca.org/publications/improving-college-readiness-research-summary-and-implications-practice>.

Author Biographies

Michal Kurlaender is a Professor of School Organization and Educational Policy in the School of Education at University of California, Davis. She investigates students' educational pathways, in particular K–12 and postsecondary alignment, and access to and success in postsecondary schooling. She has expertise on alternative pathways to college and college readiness at both community colleges and four-year colleges and universities. In addition to her appointment as Professor of Education, Kurlaender serves as the Faculty Director of the California Education Lab and Faculty Co-Director of Policy Analysis for California Education.

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Policy Analysis for California Education (PACE)

Policy Analysis for California Education (PACE) is an independent, non-partisan research center led by faculty directors at Stanford University, the University of Southern California, the University of California Davis, the University of California Los Angeles, and the University of California Berkeley. PACE seeks to define and sustain a long-term strategy for comprehensive policy reform and continuous improvement in performance at all levels of California's education system, from early childhood to postsecondary education and training. PACE bridges the gap between research and policy, working with scholars from California's leading universities and with state and local policymakers to increase the impact of academic research on educational policy in California.

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- Publishes policy briefs, research reports, and working papers that address key policy issues in California's education system.
- Convenes seminars and briefings that make current research accessible to policy audiences throughout California.
- Provides expert testimony on educational issues to legislative committees and other policy audiences.
- Works with local school districts and professional associations on projects aimed at supporting policy innovation, data use, and rigorous evaluation.

Related Publications

Kurlaender, M., Reed, S., Cohen, K., Naven, M., Martorell, P., & Carrell, S. (2018). *Where California High School Students Attend College*. Palo Alto: Policy Analysis for California Education.

Kurlaender, M. & Cohen, K. (2019). *Predicting College Success: How Do Different High School Assessments Measure Up?* Palo Alto: Policy Analysis for California Education.

Rios-Aguilar, C., Kurlaender, M., Lyke, A., & Martinez, T. (2019). *College Affordability in Every Corner of California: Perspectives from the 2019 PACE/USC Rossier Poll*. Palo Alto: Policy Analysis for California Education

Reed, S., Rios-Aguilar, C., Smith Arrillaga, E., Vargas, J., & Kurlaender, M. (2019). *Empowering the Intersegmental Agenda: Opportunities for Research, Policy, and Practice*. Palo Alto: Policy Analysis for California.



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