



Improving Academic Preparation for College

What We Know and How State and Federal Policy Can Help

Robin Chait and Andrea Venezia January 2009

Center for American Progress



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Introduction and Summary

Our society is moving toward a model of preparing all students for some kind of education and training after high school. That is what parents want for their children, what students say they want for themselves, and what analysts and policymakers at all levels believe is needed for success in a global economy. The benefits to the individual are clear—college graduates earn more money, have better career opportunities, engage in greater civic participation, and have a higher overall quality of life.¹ The average annual income for a high school degree in 2006 was \$30,072, an associate’s degree was \$39,846, and a bachelor’s degree \$56,897.² Moreover, the advantages of college education compared to a high school degree have widened over the last 60 years, although they have leveled off more recently.³

We know that students are getting the message that college pays off. In 2003-04, about 69 percent of high school seniors expected to attain a bachelor’s degree or higher, and another 18 percent expected to complete some postsecondary education.⁴ College enrollment rates increased from 49 percent in 1972 to 69 percent in 2005.⁵ Yet once students arrive in college, they are often not ready to take college-level classes. College remediation rates are high—estimates range from a little over a quarter to about a third for all freshmen, and from 42 percent to 60 percent for freshmen at two-year institutions.⁶

College completion rates are also stagnant and students are taking longer to complete their degrees. About 83 percent of high school graduates enroll in some form of postsecondary education, but only about 52 percent of students complete their degrees.⁷ Further, a very small proportion of students complete a degree in four years—“among students starting at ‘four-year’ institutions, only 34 percent finish a B.A. in four years, 64 percent within six years, and 69 percent within eight and a half years.”⁸ Stagnant college completion rates and increasing time to complete college degrees are likely related, since students who are in school for long periods of time are less likely to graduate.⁹

High rates of remediation, stagnant rates of college completion, and more time to degree completion suggest that many students are not fully ready to succeed academically in college. And weak academic preparation is a growing concern in the research and policy communities.

Jay Greene of the Manhattan Institute has estimated that only 34 percent of all students who entered ninth grade in 2002 were prepared for college when they graduated high

school.¹⁰ He defines college readiness as graduating with a regular diploma, having completed a minimum set of course requirements (four years of English, three years of math, and two years each of natural science, social science, and a foreign language), and being able to read at the basic level or above on the National Assessment of Education Progress reading assessment.

Rates of academic preparation are even lower for low-income students. Susan Goldberger of Jobs for the Future found in an analysis of data from the National Education Longitudinal Study that “only 21 percent of high school graduates from the lowest economic quintile are adequately prepared for college-level work (somewhat, very, or highly prepared), compared to 54 percent of graduates from the middle and upper levels.”¹¹ Moreover, students with better academic preparation have higher rates of degree completion. Approximately 78 percent of students who are highly prepared for college complete their degree, compared with 31 percent of students who are not prepared and 46 percent who are minimally prepared.¹²

While these numbers are of great concern, there is still a lack of consensus among researchers and policymakers about what it means to be prepared for college. Are strong academics enough? What role do financial and social capital play? How can federal and state policy help promote academic rigor and student preparation? In this report, we explore these questions in detail and look closely at what we know about postsecondary readiness and success; what is being done to prepare students for college at the federal, state, and local levels; and how well these efforts are working. This report draws on this analysis to outline a more expansive role for federal and state policy to improve preparation and readiness.

Federal policy could play an important role in communicating the need for all students to prepare for college and providing the public with information about what that means. It could also build states’ capacity to develop and measure students’ college readiness by supporting a pilot state program to develop and validate college readiness standards within the reauthorized NCLB/ESEA. Finally, the federal government should invest in research and development to support programs that align secondary and postsecondary education and improve students’ preparation for college; provide funding to improve academic preparation in struggling high schools; and improve data collection and analysis and require public reporting.

States could undertake a range of initiatives to ensure that their policies are translated into changes in curricula and instruction and better outcomes for students. States should develop better student support policies and align them with policies to increase academic rigor, support the development and evaluation of high school models that prepare all students for college, improve data systems to better assess where students are and where they need to be, and monitor and evaluate the implementation of all of these state policies to identify inconsistencies, implementation concerns, and needs for technical assistance.

There are many ways to think about postsecondary readiness. We define it as a student's ability to complete a transfer-level course in core subject areas at a two- or four-year postsecondary institution with a C or better and move on to the next course in the sequence without remediation. We do not believe that one size fits all, but we do think that there are many academic pathways and instructional approaches that are compatible with postsecondary preparation, and that all students must have the opportunity to prepare for a two-year or four-year degree or credential. The terms postsecondary education, college, and higher education are used interchangeably in this paper to mean some kind of formal education or training after high school in a postsecondary institution that leads to a credential or degree.

This paper reviews the research and makes the case for a definition that includes academic rigor, grades, specific academic skills that students will need to be successful in a college-level course, and “college knowledge”—knowledge about how to apply, enroll, and succeed in a college environment. It may be difficult to come up with objective measures for all these aspects of college readiness, but it is important to consider them all in defining readiness and in helping students meet a threshold of it.

What Do We Know About College Readiness and Success?

Much research has been conducted over the past 10 years to identify the problems related to students' transitions from high school to postsecondary education and to learn what is needed to prepare students for postsecondary education. This brief summarizes many of the important issues that are related to academic preparation, although there are countless other crucial factors in preparing students for college that are not explored here, including peer and parental influences and social and emotional issues.

Course rigor and grades

Clifford Adelman of the Institute for Higher Education Policy analyzed high school students' transcripts using longitudinal data collected by the U.S. Department of Education and documented that the intensity and quality of the high school curricula completed is the biggest predictor of postsecondary success. Adelman found high school grade point average and achievement test scores were also important:

High school curricula reflects 41 percent of the academic resources students bring to higher education; test scores, 30 percent; and class rank/academic GPA, 29 percent ... The correlation of curriculum with bachelor's degree attainment (.54) is also higher than test scores (.48) or class rank/GPA (.44).

Moreover,

The impact of a high school curriculum of high academic intensity and quality on degree completion is far more pronounced and positive for African American and Latino students than any other pre-college indicator of academic resources ... much greater than it is for white students.¹³

Adelman's work has helped to solidify an appropriate focus on course content and rigor, although educators and researchers are searching for the best proxies to measure those from a policy perspective. Similarly, Melissa Roderick and Elaine Allensworth, researchers at the Consortium on Chicago Schools Research, have found that high school GPA is one of the strongest predictors of college graduation in Chicago Public Schools.¹⁴ Unlike Adelman, they found that GPA mattered more than students' course of study.¹⁵

A number of other studies have investigated the relationship between curricula and student outcomes and have found that college preparatory curricula are associated with higher achievement and greater equity in course access.¹⁶ Overall, this research suggests that both course rigor and student achievement in those courses are critical to preparing students for college.

Yet access to rigorous courses is unevenly distributed. Low-income students are less likely to be enrolled in a college preparatory track (28 percent) than medium- or high-income students (49 percent and 65 percent, respectively). Similarly, African American and Latino students are less likely to be enrolled in such a track (28 percent and 23 percent, respectively) than are white, non-Latino students (34 percent).¹⁷ And low-income students do not fare well once they are enrolled in higher education. In 2002, 6 percent of students from the lowest-income families earned a bachelor's degree by age 24—the same percentage as in 1970.¹⁸

There is tension between course-based definitions of academic readiness and performance-based criteria. Performance-based efforts focus on moving away from seat-time, credit hours, and course titles that serve as proxies for college readiness, and toward a model that focuses more on, for example, exemplars of student work in key areas of each subject. There is not a general consensus about which route is more effective.¹⁹

Skills, knowledge, and habits of mind

David Conley, director of the Center for Educational Policy Research at the University of Oregon College of Education, has developed a set of standards gauged toward university-level expectations regarding the knowledge and skills students need to be successful in first-year coursework.²⁰ Conley and his staff conducted focus groups with faculty and administrators from universities around the country, gathered syllabi, graded student work and other course materials, and analyzed those data to develop standards for college success. He identifies four central elements to college success:

- The cognitive strategies emphasized in entry-level college courses, such as analysis, reasoning and argumentation, and interpretation.
- The content knowledge necessary to understand the structure of each academic discipline, such as the specific knowledge and skills developed by studying English, math, or science.
- Academic behaviors that enable students to cope with the academic demands of college, such as self monitoring and study skills.
- The “college knowledge” necessary to understand how the postsecondary system operates, including an understanding of the process of college admissions, financial aid, and successful functioning in college.²¹

Other researchers and practitioners might add, subtract, or change the wording, but there is a basic consensus around these four areas.

Similarly, Achieve—an organization that helps states raise academic standards and graduation requirements, improve assessments, and strengthen accountability—developed English and math benchmarks that define the knowledge and skills that high school graduates need to succeed in careers or in postsecondary education. The English and mathematics benchmarks were developed through research conducted in Indiana, Kentucky, Massachusetts, Nevada, and Texas with representatives from K-12 and postsecondary education, the business community, and other relevant groups. Achieve’s benchmarks are accompanied by career-related tasks and postsecondary assignments.²²

Researchers from the Consortium for Chicago Schools Research conducted a study of high school students in Chicago Public Schools that provides additional detail about the “college knowledge” that many students who have college aspirations lack, and the clear effect that lack of knowledge has on their ability to enroll in college. Students who intended to attend college were not taking the steps that they needed to enroll, such as researching and choosing appropriate schools to apply to, submitting applications, and applying for financial aid. For instance, only 61 percent of students who were qualified to attend a somewhat selective college actually applied.²³

The study found that “the single most consistent predictor of whether students took steps toward college enrollment was whether their teachers reported that their high school had a strong college climate.”²⁴ These schools with a strong college-focused environment communicated the expectation that students would attend college and provided students with the information that they needed to apply and enroll in college. Educators often refer to a strong college climate as a “college-going culture.”

College Summit

Helping Schools Build a College-Going Culture

There are many pre-college outreach programs that provide essential programs and services for some students. College Summit is a promising example of a program that helps schools build “a college-going culture” and increases their capacity to help students plan for and enroll in college. College Summit includes training for student peer leaders in a summer program that helps them complete a college application, a postsecondary planning course for all high school seniors, and professional development

for teachers and counselors to help them build a college-going culture in the classroom and to teach them how to help students plan for college.

College Summit also helps schools track students’ progress in applying to and enrolling in college. College Summit participants have enrolled in college at a rate of 79 percent, which is significantly above the 46 percent national college enrollment rate among low-income students.²⁵

High school instruction

The link between teacher quality and college preparedness has not been well explored in other research, but it is logical to assume that teachers have a great effect on students' college preparedness. Not only do teachers provide students with the skills they need to be successful in college-level courses, they also guide them in selecting their courses and often act as guidance counselors, giving advice about postsecondary options. Researchers are beginning to gain an understanding of what postsecondary education requires, but there are major differences to overcome regarding what high schools are teaching and what postsecondary institutions want first-year students to know. ACT's 2005-06 National Curriculum Survey found the following:²⁶

- High school mathematics teachers tend to give advanced content greater importance than college instructors. College instructors rate a rigorous understanding of math fundamentals as more important than brief exposure to advanced content.
- High school science teachers consistently rate knowledge of content—specific facts and information—as more important than an understanding of science process and inquiry skills. College instructors, by contrast, rate these skills in the opposite way; they believe science process skills are more important for students to possess when they enter college than knowledge of specific content.
- In English and writing, college instructors place more importance on basic grammar and usage skills than high school teachers. Many college instructors express frustration that students who enter their classes often can't write a complete sentence, which forces them to re-teach these basic skills and interferes with their efforts to teach higher-level skills.

High school and college instructors do tend to agree on the relative importance of specific skills in reading. Yet reading skills instruction diminishes in high school, which suggests that the reading skills students acquire in middle school or junior high are not being expanded or enriched in high school.

It seems that the vast majority of high school teachers are not being prepared to teach students the knowledge and skills that they will need to be successful in college. And we know from a large body of research that teachers are the most important school-related factor affecting student achievement.²⁷ Teachers at the high school level play a critical role in helping students prepare for college. A study conducted using longitudinal data from Illinois found that teacher quality explained some of the differences in students' college readiness rates. "We found that the proportion of students ready for college consistently increases for each racial/ethnic group as school TQI (teacher quality index) increases even when we took other school characteristics (percent poverty and minority) into account."²⁸ Stanford's Bridge Project also found that, across the sites in the six studied states, teachers of honors courses viewed their role as part teacher, part guidance

counselor and they helped their students prepare for college. Teachers of non-honors courses did not view their role that way.

Teacher preparation needs to better address the skills and knowledge teachers need to prepare all students for postsecondary education. Schools also need to ensure that they build a college-going culture in which all teachers view all students as college-bound and provide them with the opportunity to prepare for some form of postsecondary education.

The great divide between K-12 and postsecondary education

One of the challenges in improving students' preparation for college is that activities and reforms that aim to bridge the gap between high school and college are fighting against decades of difference and separation on many levels, including issues surrounding prestige at the postsecondary level, postsecondary incentives to connect with K-12, content and performance standards, local governance, curriculum and instruction, support services, finance and budgeting, professional development and training, networks and unions, data collection, and incentive structures, to name a few.²⁹ We know that our current systems are acting as they were designed to, given their historical roots and political context. As Michael Kirst and Michael Usdan write:

Historically, there have been few connecting mechanisms or institutions which have enabled the levels of education to work cooperatively on issues of mutual concern. Interlevel issues despite the attention they have received in growing numbers of states are on the margin in most places and remain nobody's direct responsibility. Interlevel issues have no immediate constituency and interface concerns commonly fall through the cracks between the K-12 and postsecondary systems. In fact, there is little recognition in either our lay or professional worlds that no other nation has the degree of K-16 separation found in the United States.³⁰

Not only are schools and postsecondary institutions separate organizationally; faculty from both levels rarely have the opportunity to develop curricula together, or even to discuss expectations. State governments, agencies, and legislative committees are divided between K-12 and postsecondary education and often also between two- and four-year institutions and technical and traditionally academic fields. While there are separate issues at stake, these divisions serve to create silos and turf wars—and perpetuate a lack of knowledge about the other levels and disciplines.

Higher education institutions are more insulated from outside intervention than K-12 schools and are extremely diverse in their missions and focus. Moreover, public and private selective institutions have more than enough students applying, so many do not have a deeply vested interest in “K-16 reform.” Non-selective institutions also have little incentive to promote reform because they often receive more funding if they “churn”

students through the system without regard to course success or degree completion. K-12 schools often receive all the blame for students' remediation needs, yet they juggle myriad responsibilities, have few college counselors, and possess little up-to-date information about college-level course-taking expectations.

Our educational structures are therefore functioning as they were intended to, yet do not meet individual students' or societal, needs. K-12 schools usually do not start preparing students for postsecondary education until some point in high school, while students from affluent backgrounds whose parents attended college often report that they have always been preparing for college.³¹ This deeply-rooted historical divide will be difficult to shift without buy-in and committed action from both the K-12 and higher education communities. These are the challenges that policymakers face as they develop policies to improve academic preparation for college.

What Is Being Done to Improve Preparation, and How Is It Working?

Policymakers at all levels have paid increasing attention over the past 10 years to the rigor of high school. Many states have adopted more challenging standards, assessments, and graduation requirements, or are creating measures that assess students' college readiness. Some states and districts are experimenting with large-scale academic supports to help students succeed in meeting these more rigorous standards.³² Other states are engaging in efforts to better align high school and college education, such as creating dual enrollment programs.

Adopting college readiness standards and assessments

Until recently, K-12 standards and assessments were developed, by and large, without consulting with higher education institutions. Now, organizations such as Achieve, the ACT, and the Educational Policy Improvement Center at the University of Oregon are taking the lead in defining the knowledge and skills that high school graduates need to succeed in college (without remediation) and the workplace in core subject areas.³³

According to data from Achieve, 19 states report that their high school standards are aligned with postsecondary expectations, and 26 additional states report that they are in the process of doing so.³⁴ Because college readiness standards and assessments are so new, there is little research to help people understand the best ways to use them to improve instruction and student learning.

Several states have increased the rigor of high school exit exams, or aligned high school assessments with postsecondary entrance requirements in order to assess whether students have mastered a more challenging curriculum and are ready for college and work. According to data from the Center on Education Policy, 26 states have implemented or plan to implement high school exit exams by 2012.³⁵ CEP places these exams in three categories: "minimum competency exams, which generally focus on basic skills below the high school level, comprehensive exams, which are aligned with state standards and are generally targeted at the ninth or 10th grade level, end-of-course exams, which assess whether students have mastered the content of specific high school courses; these exams are usually standards-based, and students take each test after completing a specific course."³⁶

CEP's data demonstrate a move away from minimum competency exams and toward standards-based and end-of-course exams. "By 2015, no state will be using minimum competency exams, a big shift from 10 states in 2002. Seventeen states will be using standards-based exams, and 11 will be using end-of-course exams (including four states that will be using a dual exam system)."³⁷ Moreover, according to Achieve, nine states have incorporated college readiness exams as part of their statewide assessment system for all high school students and 23 states plan to do so in the future.³⁸

Adopting college readiness standards and assessments and aligning the high school curricula with them seem like logical improvements over the originally developed state

The California State University system's Early Assessment Program

The California State University system is taking a different tactic to improve readiness. It worked with K-12 schools to augment the 11th grade assessments to include items that test for students' readiness for college.³⁹ CSU established the Early Assessment Program to provide high school students with information to measure their readiness for college-level mathematics and English in their junior year and to help them improve their skills during their senior year.

The EAP's goal is to ensure that California high school graduates who enter CSU are prepared to enroll and succeed in college-level courses. The impetus for the EAP was the dismal remediation rate within CSU. Approximately 50 percent of the system's first-time freshmen require remedial education in English, mathematics, or both. All of the students admitted to CSU institutions have completed a college preparatory curriculum and earned a B or higher GPA in high school. Thus, it was clear that those proxies were not working and that true curricular and assessment alignment needed to occur.

The architects behind the reform decided that anchoring a college readiness reform in California's K-12 testing system would be the most effective way to ensure that the reform affected as many students as possible and could be institutionalized and sustained over the long term. CSU then worked collaboratively with the California State Board of Education and the California Department of Education to overcome bureaucratic, procedural, and political problems and to develop test items that will indicate to students whether or not they are ready for college-level work.

Representatives from the K-12 and CSU sectors worked together to augment the K-12 California Standards Test with mathematics and English items that measure college-ready knowledge and skills. The mathematics items assess whether students have a deep enough knowledge of algebra and geometry. The English proficiency standards are similarly aligned with the CSU standards in English-language arts, but focus more attention on requiring students to demonstrate their reading and writing skills. There is also a 45-minute essay requirement.

CSU administrators realized that the most appropriate political lever was to augment the 11th grade tests, but that the only way to affect student learning is to change curriculum and instruction. Since the test augmentation, the majority of the CSU's work has focused on senior year coursework and the pre- and in-service activities. For example, to help students improve their English skills, K-12 and postsecondary educators developed a 12th Grade Expository Reading and Writing Course that high schools may adopt. It is aligned with California's content standards and geared toward preparing students for college-level English by focusing on analytical, expository, and argumentative reading and writing. It will be important to see longitudinal data that focus on the effect of the EAP on students' enrollment and success in postsecondary education; there is some concern that signaling to high school students that they are not ready for college could diminish access.

standards and assessments. It made little educational sense to tell students that the final high school standards were benchmarked at the eighth through 10th grade levels, as many states' were. However, along with readiness standards and assessments, there must be multiple pathways for students that acknowledge that students learn differently and are engaged in different ways.

Readiness standards also need to be translated into language that teachers can use, connected to curricula, and communicated to students early on. Teachers, counselors, and others will need professional development to use them effectively. Assessment of these standards should be used for diagnostic purposes only so that students can use the information to plan future course-taking and educators can assess how students are doing, identify what is working, and provide the academic, social, and other kinds of support students need to improve their preparation.

Adopting rigorous graduation requirements

Along with adopting more rigorous standards and assessments, many states are adopting more rigorous graduation requirements to ensure that all students are taking the courses they need to be prepared for college. These policies are based on research, cited earlier, that has found that students who take more rigorous curricula are more successful in college. Graduation requirements are either default curricula that students may only opt out of with parental permission or mandatory college preparatory curricula that students must complete to graduate with no opt-out provision.

According to data from Achieve, 18 states now have “college and work ready” graduation requirements and 12 other states report that they plan to adopt these curricula for all students in the future. Achieve defines a college and work-ready curricula as including “four years of challenging math, at least through Algebra II or its equivalent, and four years of rigorous English aligned with college and work-ready standards.”⁴⁰

The evidence cited as the basis for implementing more rigorous curricula has generally been taken from correlational studies. Students who take more rigorous curricula are more likely to have higher scores on the ACT, graduate from high school, and complete college.⁴¹ Most of the studies that have assessed the effect of course rigor on college readiness have not evaluated the effects of a broad-access college preparatory curriculum policy on student outcomes. Access to college preparatory curricula is not randomly assigned in these studies, and they are unable to control for selection bias. In other words, there may be differences in the students that choose a college preparatory curriculum and schools that offer it, even though the studies control for socioeconomic characteristics.⁴²

The San Jose, California school district has implemented a policy requiring all students to complete what is called the “A-G sequence”—courses that are aligned with the eligibility

requirements of the University of California and the California State University Systems. The district implemented professional development for teachers and safety net programs for students to accompany the more rigorous curriculum, including Saturday academies, tutorials, shadow classes, and after-school and summer extension classes.⁴³

A variety of measures indicate that San Jose's policies were successful. Following the A-G requirement, increasing percentages of students completed the curriculum and passed their courses; student GPAs and SAT and achievement test scores rose, and graduation rates remained steady.⁴⁴ It will be important to continue to follow independent evaluations of San Jose and other districts that have implemented similar policies to monitor changes in student achievement, engagement, motivation, and self-efficacy; instructional effectiveness; high school graduation and dropout rates; college enrollment; and college success.

Another study has evaluated Indiana's college preparatory diploma, the Core 40, following the implementation of a policy that made it available in every high school, but before it became the required curriculum for all students. The study analyzed data from a cohort of students from high school through the second year in college. The study found that the Core 40 and honors diplomas "were positively associated with enrollment in all types of four-year colleges, although honors diplomas had a more substantial direct association with these college choices."⁴⁵ The study also found that "academic preparation—the combination of diploma type and high school grades—explained more variations in enrollment in four-year colleges than did SAT scores."⁴⁶

Yet another recent evaluation assessed universal college preparatory curriculum in Chicago. Researchers at the Consortium on Chicago Schools Research evaluated the effects of Chicago's universal college preparatory curriculum—instituted in 1997—on student achievement in the city. Elaine Allensworth and her colleagues evaluated the policy's effect on ninth grade English and math achievement by using longitudinal data to look at student outcomes before and after it was instituted.⁴⁷

The researchers found that while students were more likely to get credit for Algebra I after the policy was put in place, students of average and below average ability were also more likely to fail courses and grades decreased for students of all ability levels.⁴⁸ Absentee rates increased after the policy was instituted, and the policy had no effect on students' test scores in mathematics.⁴⁹ Students were more likely to earn credit for English and failure rates were unaffected, but "neither English GPA nor reading test scores were influenced by enrollment in English I instead of remedial English."⁵⁰ Moreover, high school graduation and college enrollment rates did not improve following the policy's adoption.⁵¹

This evaluation only examines one policy in one district, but it suggests that researchers and policymakers should be cautious in relying on the promise of a universal college preparatory curriculum.

Indiana's 21st Century Scholars

Indiana's 21st Century Scholars program is a national model for combining financial aid with pre-college access intervention. Initiated in 1990, it became the first state program to provide the promise of college tuition costs for middle school students who qualify for the federal free and reduced lunch program. The Scholars Program targets students in the eighth grade and provides support services and guarantees grant aid to students who complete a pledge.

Students must be residents of Indiana to be eligible for the program; be enrolled in seventh or eighth grade at a school recognized by the Indiana Department of Education; meet the program's income requirements (a family of four can earn up to \$38,203 a year); and make a commitment to fulfill the Scholars Pledge. The pledge includes promises about high school graduation, GPA, drug and alcohol use, applying for postsecondary admission, and applying for financial aid.

Indiana, in return, covers most or all tuition and fees above the financial aid reward for each scholar at a public institution in Indiana, or contributes a similar portion for tuition at an independent college. Indiana also provides support services for the scholars, disseminates additional infor-

mation to them about postsecondary education, and encourages them to pursue a college preparatory curriculum.

The Scholars Program pays for 80 percent of the approved tuition and fees. If a student has completed a more rigorous diploma—a Core 40 diploma—that student receives 90 percent of the tuition and fees. All of the tuition and fees are covered if a student completes the most rigorous diploma pathway: the Academic Honors diploma. This creates an incentive for students to complete a rigorous course of study in high school. The programs address financial needs and send signals to students regarding academic preparation for high school.

A report that analyzed data from the program found that receiving a student aid package had a substantial and direct influence on persistence for freshmen, but sophomores who received packages with 21st Century awards had the same probability of persisting as students who did not receive aid. A conclusion of the report is that the 21st Century Scholars program helps equalize postsecondary opportunity, but that academic readiness is still a challenge.⁵² This likely supports the view that more is needed than a default curriculum that relies on course titles as indications of rigor.

Providing academic supports to meet rigorous standards

More rigorous standards, curricula, and assessments can result in students mastering a more rigorous curriculum and acquiring the skills and knowledge they need to be successful in college. But this success will probably depend on a range of strategies that need to accompany the policies.

Several states are beginning to think about what support policies students need in order to be successful after high school. More than half of all states require remediation for low-performing high school students.⁵⁵ Many states identify these students for remediation based on their performance on state assessments.⁵⁶ Nineteen states also require individual plans for at-risk students that identify their areas of weakness and develop plans for helping them improve.⁵⁷ And 16 states provide alternative pathways to help at-risk students obtain their high school diplomas.⁵⁸ It is likely that the nature and intensity of these remediation programs varies quite a bit.

ConnectEd: The California Center for College and Career

The California-based initiative, ConnectEd: The California Center for College and Career, is focusing on “identifying, supporting, and expanding pathways” that prepare high school students to graduate and be successful in either postsecondary education or careers. ConnectEd’s multiple pathways are “multi-year, comprehensive programs of academic and technical study organized around broad industry sectors (e.g., biomedical and health sciences, construction and building design, agriculture and renewable resources, and arts, media, and entertainment) that prepare high school students for career and a full range of postsecondary options, including two- and four-year college or university, apprenticeship, the military, and formal employment training.”

The pathways are comprised of at least four parts:⁵³

- An academic core that meets the eligibility requirements for admission to California’s public universities.
- A technical core of at least four classes that prepare students “for high-skill, high-wage employment.”⁵⁴
- Work-based learning opportunities, including mentoring and job shadowing that then turn into more intensive experiences.
- Support services such as help mastering advanced academic and technical content.

ConnectEd is too new to have results, but the data, when available, should be useful for other states, regions, and schools interested in providing multiple curricular opportunities for students.

There are also some new initiatives to encourage state policymakers to think more about how to ensure that students are prepared to meet high standards. Achieve is currently working with Jobs for the Future on “Moving Forward: High Standards and High Graduation Rates,” a project to develop state policies that support both high standards and high graduation rates, supported by the Carnegie Foundation. Through this project, the organizations have advised a number of states on how they can adopt policies that advance this dual agenda. High standards and high graduation rates are critical, because while it is likely that policies to increase academic rigor are necessary, it is also likely that they are not sufficient to prepare students for college.

Ensuring course quality

Some states and national organizations are beginning to realize that the proxies most commonly used to measure course quality—course titles and seat time—are not enough. High schools need more specific information about the content of the coursework as well as the specific skills and habits of mind that students need to succeed in postsecondary education.

Currently, the K–12 standards movement and efforts to improve higher education are operating on different tracks. High schools are focusing on how many courses students take, and whether or not those courses are labeled as college preparatory. Taking rigorous courses is crucial, but students also need to know that the content of their courses will prepare them for college—not that they need four years of English to get into college, or that their course is named Honors English.⁶¹

Massachusetts—A Variety of Efforts to Improve College Readiness

The Massachusetts Department of Education and the Massachusetts Board of Education have teamed up to develop a website that provides students and their parents with information about preparing for college.⁵⁹ It walks visitors through the key steps of preparing for college, such as taking the right classes and the SAT or ACT exams, applying to schools and applying for financial aid, and choosing an area of study.

The state also provides academic support to students in grades eight through 10 who perform poorly on the Massachusetts Comprehensive Assessment System, the state assessment they must pass to graduate from high school. Student performance on the MCAS in these grades provides a crucial, early indicator and intervention point for students who are not on a path toward college preparation. The state also gives academic support to students in grades eight through 12 who have performed at the lowest levels on the assessment.

Academic support from the state comes in the form of grants to school districts, higher education institutions, workforce investment boards, and other entities to provide an array of programs:⁶⁰

- One-stop career centers help students who have completed 12th grade meet their academic, employment, and career needs and attain the skills necessary to earn their Competency Determination.
- Work and learning programs offer “quality innovative and intensive instruction in English Language Arts and mathematics” through programs that incorporate work and academics.
- Higher education institutions and partners provide academic instruction and support services so students may complete their CD and pursue further education.
- Collaborative Partnerships for Student Success is a state grant program intended to supplement district resources and serve as a part of a comprehensive intervention process to help students pass the MCAS, provide career and college guidance, and offer summer academic support.

Some states are using strategies to ensure that courses are, in fact, as rigorous as their titles. One such strategy is requiring statewide end-of-course exams that assess the content students should have learned in a particular course.⁶² Fourteen states are currently working together as part of an Achieve initiative to develop an Algebra II exam.⁶³ A few states are also beginning to incorporate measures of proficiency as part of their graduation requirements.⁶⁴ Most notably, Rhode Island requires high school graduates to meet proficiency measures in addition to completing Carnegie units, or credit hours.⁶⁵

Dual enrollment

Dual enrollment programs can play an important role in providing a wide range of curricular options for students and exposing students to postsecondary campuses and standards. These partnerships may also offer accelerated learning options for traditionally underserved students, alternatives for students who do not find their high school curricula engaging, and a faster transition to college for students who cannot afford to pay tuition for all the years it takes to complete a four-year degree.

Dual enrollment is a promising strategy, but there is little research documenting its effect on underserved students. There have been few large scale studies because the research would require data across systems, and partnerships between schools, districts, state agencies and others—partnerships that either do not exist or do not have the extra person-power and funding to collect and utilize data.

Until recently, dual enrollment was viewed as a vehicle for traditionally college-bound students to earn college credit. Many researchers and educators now believe that dual enrollment has the potential to provide traditionally underserved students with access to college courses. It also allows them to become part of a college culture, gain confidence about their academic abilities, and save time and money toward their college degrees or certificates.⁶⁶

The Community College Research Center at Columbia University is conducting large-scale research on dual enrollment, so more should be known soon. Initial studies by the CCRC examining dual enrollment in two states have found that dual enrollment participation is positively related to: earning a high school diploma, enrolling in college, enrolling in college full-time, persisting into the second year of college, receiving higher GPAs one year after high school graduation, remaining in college two years after high school graduation, earning more credits three years after high school graduation, and pursuing a bachelor's degree.⁶⁷

Importantly, this study found that in Florida, male and low-income students seem to benefit from dual enrollment more than other students. The research did not determine why these students benefited more than others and which program aspects—course location, instructor, supports, etc.—have the largest positive effects.⁶⁸

Early college high schools

Early college high schools utilize dual enrollment as a key component of their course offerings. ECHSs are small schools that blend secondary and postsecondary education so that students can earn, tuition-free, both high school and associate's degrees or up to two years of credit toward a bachelor's degree after five years of study. These schools focus on serving students who are traditionally underserved in postsecondary education. A major goal is to provide students with the opportunity to earn well past the "20 college credit threshold" that is predictive of whether a student completes college.⁶⁹ Since 2002, over 160 ECHSs have been designed, nationally, with a long-term goal of developing 250. The Bill & Melinda Gates Foundation has provided all schools in the ECHS Initiative with start-up funding, and there are 13 intermediary organizations that work with the schools to develop their programs and provide technical assistance.

ECHSs are one model of a high school that includes some promising evidence of success in preparing students for college. ECHSs are likely to boost students' college readiness since they include college course work. They are a grand experiment in scale,

though the completed network will be small compared to the number of high schools that need assistance. There is early evidence from a whole schools perspective that early college high schools provide the kind of academic rigor, academic and non-academic supports, engaged adults, and other necessary factors to help traditionally underserved students prepare for college.

Early outcomes are promising for ECHS graduates. The first three early college high schools granted diplomas to 115 students in 2006, and more than 900 students across the nation graduated from 17 early college high schools in 2007.⁷⁰ About 85 percent of students accumulated between a semester and two years of college credit by graduation; over 60 percent of the graduates were accepted to four-year colleges; and more than 250 early college high school graduates earned merit-based college scholarships.⁷¹

Aligning career and technical education with postsecondary preparation

There is a growing body of work on developing career and technical education programming that has a strong academic core, similar to the discussions focused on the integration of vocational and academic curricula that took place in the 1990s, but this new incarnation focuses on postsecondary preparation. California, Pennsylvania, North Carolina, Massachusetts, and other states and localities are experimenting with pathways that combine academic and applied rigor and lead to a postsecondary or career path.⁷²

The effect of state policy

States have, all in all, been engaged in a great deal of activity to better prepare students for college. Yet this increased attention has not yet resulted in dividends for students. One hypothesis as to why is just that all of this activity will take time—it will take time for the increasing rigor of standards, assessment, and curricula to translate into improved instruction on the ground. It will take time for districts, schools, and teachers to understand new expectations and use them to inform higher quality instruction that better prepares students for college.

It is also possible that the proxies that states, regions, and districts are using to measure academic rigor and their methods for increasing rigor are not effective or are not consistently effective. States may need to figure out where implementation has fallen short and why. For instance, have the default curricula been offered in every high school? Do teachers have the professional development they need to teach it? Do students need more supports to meet the more rigorous standards? Is the high school curriculum aligned with the elementary school curriculum to ensure students are prepared for a more challenging high school curriculum?

Research on academic preparation has found that rigorous academic knowledge and skills, and certain habits of mind and non-academic knowledge and skills, are needed for students to be prepared for and succeed in some form of postsecondary education and training. Students and their families—particularly traditionally underserved students—also need a web of supports, early academic help to get ready for rigorous coursework, and early and high-quality information about college regarding financial aid, academic expectations, admission, placement, and so forth. There is growing concern that rigor alone is necessary but not sufficient to prepare students for college; many students also need to be able to connect with curricula through their own experiences. As with all issues in education reform, one size does not fit all students, and preparation for some kind of education after high school is a multifaceted issue, given the wide variety of programs and disciplines.

Many states, regions, and districts have not adequately focused on providing students with the academic and nonacademic supports or the specific knowledge and skills that they need to succeed in college. Research shows that, in addition to rigorous standards, assessments, and curricula, districts need information about how to align their instruction with college-level expectations, early identification and interventions systems for at-risk students beginning in elementary and middle schools, and comprehensive systems of support that combine academic and non-academic components. It is also likely important to provide early and consistent information about how to navigate through postsecondary processes, such as financial aid and advising. Federal and state policies can support these key components of a comprehensive academic preparation system.

The Role of Federal and State Policy

Most of the hard work of reforming high schools will have to take place at the local level, but federal and state policies and incentives could encourage districts and schools to engage in promising reforms that better prepare students for college. State and federal investments in data collection, research, and development could also inform local reform efforts and support the expansion of promising reform models.

Federal policy and academic preparation

The federal government has historically played a limited role in helping high schools prepare students for postsecondary education. There are many small programs funded within the No Child Left Behind Act, the Higher Education Act, and the Carl D. Perkins Act that focus on some aspects of the high school to postsecondary education transition, but these programs are mostly silos that are not coordinated with other local, state, or federal programs.

A major federal funding stream for K-12 education comes from the No Child Left Behind Act—the name given to the 2001 reauthorization of the Elementary and Secondary Education Act. Yet few high schools receive Title I funding—federal funds targeted to schools and districts with large numbers of poor children to help them meet challenging academic standards. Only about 8 percent of students served by Title I are high school students—therefore, most high schools are not subject to the law’s accountability provisions.

NCLB has served an important rhetorical role in advocating that “all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments.”⁷³ Drawing attention to the achievement of all students is probably the biggest accomplishment of the law, according to many policymakers and researchers. But federal policy has not included a sufficient emphasis on preparation for postsecondary education and success, or given schools the resources and support they need to improve student preparation for college. The Higher Education Act includes a number of programs that focus on preparing traditionally underserved students for college, but these programs are small and not necessarily connected to state and local high school reform efforts.

Federal policy could play an important role in communicating the need for all students to prepare for college and providing the public with information about what that means. It could also build states' capacity to develop and measure students' college readiness and create incentives and support for innovative college readiness activities that are focused on traditionally underserved students at the state and regional levels. There are at least five strategies federal policy could support:

1. Mounting a communications campaign promoting the importance of giving all students the opportunity to be ready for postsecondary education.
2. Developing a state pilot program to develop and validate college readiness standards within the reauthorized NCLB/ESEA.
3. Investing in research and development to support programs that align secondary and postsecondary education and improve students' preparation for college.
4. Providing funding to states to improve academic preparation in struggling high schools.
5. Improving data collection and analysis and requiring public reporting.

Mounting a communications campaign

The federal government should launch a large-scale communications campaign about postsecondary readiness. The campaign would focus on the need to ensure that all students have the opportunity to prepare well for some form of postsecondary education, and publicize what is known about the academic rigors of preparing for college. Such a campaign could include information about different types of institutions, programs, disciplines, admission and placement requirements, and what it takes to succeed in college.

Students often do not understand what college means—that there is not just one entity called “college.” Stanford’s Bridge Project found that many students do not know the difference between an associate’s degree and a bachelor’s degree, and most believe that getting admitted to college is the hardest part. Most postsecondary institutions in the United States admit the vast majority of people who apply; the hardest part is graduating from college. Many states are engaged in reforms that connect secondary and postsecondary education, and this message is part of that work, but a coordinated national message could help bolster those efforts. Another critical federal role will be to help states coordinate all of the different funding streams and programs that address college preparation.

Developing a pilot state college readiness standards and measurement program

NCLB has not had much of a focus on improving students' preparation for college. Many states have worked on their own or with national organizations to develop standards and assessments that reflect the skills and knowledge students need to be successful in college. Former Education Secretary Margaret Spellings unveiled in September a list of indicators

for assessing national educational progress and included a measure of college readiness developed from the ACT's benchmark scores for college readiness in reading and math.

A reauthorized NCLB/ESEA could contain a pilot program for a few states to develop college readiness standards that reflect the skills and knowledge that research has determined to be important. The program would measure students' progress toward the standards and validate the standards by assessing whether the students who meet them are more successful in college. It would make sense to initially begin the program in English and mathematics. The federal government would approve states' applications to the pilot program and provide guidance to states based on the research about the skills and knowledge students need to be successful in college.

Principles for approving state applications should include involvement from the higher education community in the development of standards, a rigorous validation process for the standards, and the inclusion of a variety of indicators of student performance that research suggests would be important for college success. Measures might include grades, test scores on a college placement test, state assessments, and student transcripts. Some important components of college readiness are difficult to measure but should be recognized in some way by states in their applications. We know, for example, that "college knowledge"—an understanding of how to apply, enroll, and navigate a postsecondary system—is important and should be considered in evaluating college readiness, but such knowledge might be hard to measure. Potential indicators of college readiness might include whether students applied to several schools and whether they sought financial aid; and indicators of interest might include whether they enrolled and graduated.

If the pilot is successful, the federal government could expand it to all states and develop a standard process for approving states' college readiness standards and indicators. Federal policy should also require states to report on their students' progress toward meeting the standards.

The federal government could additionally provide funding to a number of independent, nonpartisan research organizations to develop college readiness standards and comprehensive indicators that states and districts could use in assessing students' readiness for college and careers. These measurements would be published for potential use by states and localities, along with a technical assistance guide for state agencies, schools, districts, and postsecondary institutions and systems.

Investing in research, development, and demonstration projects

The federal government should invest in the development, evaluation, and expansion of innovative models for schools and postsecondary readiness initiatives. These models should be built using methods that research and evidence from practice tell us improve preparation for college for underrepresented student populations. The TRIO, GEAR UP,

and Fast Track to College programs are examples of promising federal demonstration programs and provide some information about important program elements.

TRIO and GEAR UP are grant programs targeted to partnerships of schools, postsecondary institutions, businesses, and community organizations that assist students from disadvantaged backgrounds successfully transition to college. The programs include “common features such as counseling (academic, financial, and career), tutoring services, mentoring, parental involvement, assistance with college and financial aid applications, high-quality instruction, and financial incentives.”⁷⁴ Research indicates that the programs positively affect college-going.⁷⁵ These programs are models for how federal policy can support effective demonstration projects that improve academic preparation and college transition for disadvantaged students, and should be expanded. A rigorous evaluation component should be incorporated into these demonstration programs to determine which program features are most effective.

Successful components should really be incorporated into all high schools, but until they are, federal demonstration programs that support the adoption of these strategies will be helpful. The statistics on college completion highlight the fact that there is still a lot left to learn. The federal government is uniquely positioned to invest in research and development and disseminate the findings of promising research.

Providing funding to states to improve students’ academic preparation in low-performing high schools

If students don’t graduate high school, they are not likely to be prepared for college, and discussions about improving graduation rates are often disconnected from discussions about better preparing students for college. Yet a powerful dropout prevention strategy

The Fast Track to College Act

The Fast Track to College Act of 2008 was introduced in the House by Representatives Dale Kildee (D-MI) and Rahm Emanuel (D-IL) and in the Senate by Senator Herb Kohl (D-WI) in September 2008. The bill would provide federal support to partnerships of school districts, institutions of higher education, and nonprofit organizations to implement dual enrollment programs or early college high schools. One of the goals of the program is to increase high school and college graduation rates among low-income youth. Programs funded by the Act are designed to meet the needs of low-income and struggling students—they must provide academic and social support services and community outreach services.

will help students prepare for meaningful alternatives after high school, including post-secondary training. Federal policy can provide resources and funding to struggling high schools to improve graduation rates and provide students with the academic and other skills they need to prepare for college.

Current graduation rates are often not calculated well, but estimates indicate that rates for poor and minority students are at about 50 percent—an unacceptably low level. Graduation rates are receiving a great deal of media, policy, and school-level attention these days, but there is little federal funding targeted toward improving them. States need funding and resources to identify low-performing high schools and intervene to help them graduate more students and better prepare them for postsecondary education.

Improving data collection and analysis and requiring public reporting

Most federal-level and state-level K-12 education reform activities and efforts to increase college preparation, access, and completion are currently disconnected. Many policies and strategies are needed to bridge the divide between high school and college, and data systems are one crucial area where federal investment is particularly appropriate and needed. Federal funds could support the expansion of state data systems that bridge K-12 and postsecondary education systems and provide longitudinal data on individual students. These systems would connect elementary, secondary, postsecondary, and ideally also workforce, criminal justice, and other public datasets to analyze particular state and regional needs and the effectiveness of particular interventions.

The Graduation Promise Act

The proposed Graduation Promise Act, introduced by Senators Jeff Bingaman (D-NM), Richard Burr (R-NC), and Edward Kennedy (D-MA) in April 2007 and Representative Rubén Hinojosa (D-TX) in the House in June 2007, provides funding for states to intervene in struggling high schools. The GPA includes three components:

Title I: Develop state-level intervention strategies to improve low-performing high schools. The GPA provides formula grants to states to develop high school improvement systems that would identify low-performing high schools and provide them with the support and technical assistance they need to boost student performance.

Title II: Develop and replicate effective models. The GPA offers competitive, five-year grants to school development organizations, youth development organizations, postsecondary institutions, nonprofit organizations, districts, and states to develop or replicate and implement research-based models for improving student achievement and increasing graduation rates.

Title III: Build state capacity to improve academic rigor and graduation rates. The GPA includes competitive, five-year grants to states to develop policies and systems that would improve graduation rates while ensuring rigorous academic standards.

Federal funds could also support the development of early warning data systems at the district level. These systems are able to identify students who are most at risk of dropping out of school so that the district can provide them with intensive services to help get them back on track.

High-quality data systems would also help states improve the quality of their graduation rate data so they could better assess school performance and identify schools that need assistance. A federal investment in state data systems, accompanied by a requirement that states collect a cohort graduation rate that is disaggregated by the same categories that are currently required of state assessments, would go a long way toward ensuring that all students are counted and that struggling schools are identified. The National Governor's Association has proposed this cohort graduation rate, and former Secretary Spellings passed this regulation in October that imposes a common definition of a graduation rate in addition to disaggregation of the data by race, ethnicity, and other major characteristics.

The federal government should moreover require schools to report college completion information. These data systems will help states track students after they leave high school, which would enable them to identify gaps in students' preparation and areas where high school curricula, teacher education, and educator professional development could be strengthened.

Public reporting could increase public pressure to address poor outcomes. Any work in this area should be coordinated with organizations that are already involved in this issue, such as the Data Quality Campaign, Achieve, and the National Center for Higher Education Management Systems. States could learn from states that are on the leading edge of this work, such as Florida.

State policy and academic preparation

An increasing number of states are developing policies to increase the rigor of high school education and improve students' academic preparation for college in response to economic pressure coupled with a growing body of research that indicates rigorous coursework is predictive of college completion.⁷⁶ Thirty-two states are currently working with Achieve as part of the American Diploma Project to implement policies that ensure "every high school graduate is prepared for college or work."⁷⁷ Twenty six states also participated in the National Governor's Association's Honor States Program—a \$23.6 million, governor-led initiative supported by the Bill and Melinda Gates Foundation to improve high school and college-ready graduation rates.

In addition to existing efforts, states could undertake a range of initiatives to ensure that their policies are translated into changes in curricula and instruction and better outcomes for students. States should utilize four strategies:

1. Developing better student support policies.
2. Funding, evaluating, and replicating high school models that prepare all students for college.
3. Improving data systems to better assess where students are and where they need to be.
4. Monitoring and evaluating the implementation of state policies to identify inconsistencies, implementation concerns, and needs for technical assistance.

Developing statewide student support policies

Recent studies have helped to identify schools with particularly low graduation rates, although better and more accurate data will be vital, but most states do not yet have comprehensive systems for helping to turn those schools around or for providing the necessary support services to students who are at risk of dropping out. Federal funds could support states in these endeavors, but states will need to provide a significant infusion of state resources and develop systems that meet the unique needs of students in their states.

Efforts to improve graduation rates and recover students who drop out should be coordinated with broader efforts to connect secondary and postsecondary education. States should help districts develop a range of innovative high school models and supports that work for all students. Support systems should moreover help students succeed in taking and passing college preparatory curricula, not just in helping students complete high school.

Replicating high schools that prepare all students for college

While there are many high schools that are designed to prepare all students for college, there is little funding to expand these models to scale. States could fund evaluations of promising models for high schools that prepare all students for postsecondary education, and then support the expansion of effective models.

Develop data systems that track students from pre-K through college completion

According to Achieve, only nine states have operational P-16 longitudinal data systems capable of tracking an individual student's progress from pre-K through college graduation.⁷⁸ Without these data, states will not be able to assess how they are preparing students for college, where gaps are in students' preparation, and areas of the curriculum that need improvement.

It is impossible to assess the effectiveness of new programs and policies without valid and reliable cross-system data. Data systems must span K-12 and postsecondary education and preferably follow graduates into the workforce. Schools and postsecondary institutions need assistance with regard to using the data to improve curricula and instruction.

Monitor and evaluate implementation of state policies across districts

Adopting policies to improve college preparation is an important first step in improving college access and success for all students. Yet policies must affect instructional practices and curricula in order to make a difference. States need to evaluate their policies and work to ensure that they are effective and designed and implemented with consistency. States also need to assess policies' effect on a variety of outcomes for different student populations. This monitoring will likely identify challenges and areas where technical assistance or new program development is needed.

States can also develop model programs that help districts ensure traditionally under-represented students are motivated and prepared for college-level work. There are several examples of innovative approaches that improve college preparation for underrepresented students, such as Indiana's 21st Century Scholars Program and the California State University's Early Assessment Program. Indiana's program ties together need-based aid and rigorous course taking, while California will develop college-ready standards, augment the state's high school exams, and relate teacher training and professional development to these standards.

Conclusion

At the top of the list of reasons for increasing focus on postsecondary readiness and success sit mediocre and stagnant postsecondary educational attainment, the health of the nation's economy, and equity concerns. Low college completion rates, longer times to degree completion, and high remediation rates indicate that academic preparation is one critical cause of this low educational attainment.

Research shows that rigorous academic knowledge and skills—and certain habits of mind and non-academic knowledge and skills—are needed for students to be prepared for and succeed in college. All students, and traditionally underserved students in particular, need a web of supports, early academic help to get ready for rigorous coursework, and early and high-quality information about college, including information about financial aid, academic expectations, admission, and placement.

The federal government should create incentives for states, districts, and schools to address these needs by providing widespread public information about how students can prepare for college; building states' capacities to develop and measure students' college readiness; and supporting innovative college readiness activities focused on traditionally underserved students. States should undertake a range of strategies to ensure that their policies to improve academic preparation are translated into changes in curricula and instruction and better outcomes for students. These state strategies might include developing better student support policies that are connected to efforts to increase academic rigor and monitoring the implementation of state policies to identify inconsistencies and needs for technical assistance.

There is a danger that federal and state policies will not be connected to the hard work that is likely to improve achievement on the ground level—in schools and classrooms. It will therefore be vital that federal, state, and local governments pay greater attention to measuring and assessing college readiness, developing greater knowledge about what college readiness means and how to help students get there, and providing an additional infusion of resources to give students the academic and other supports they need to be successful.

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