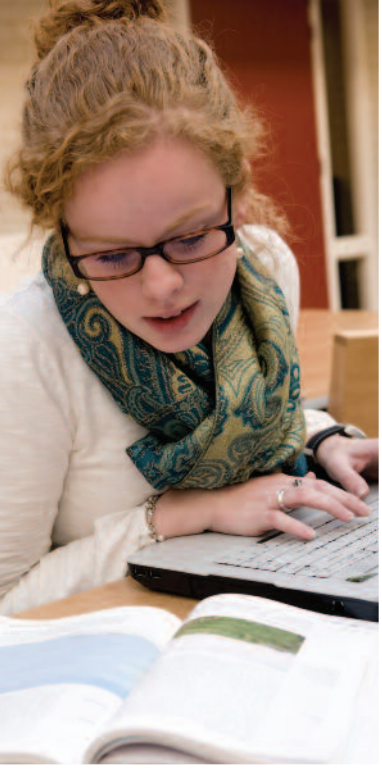

Accelerating the Agenda:

Actions to Improve America's High Schools

A Joint Publication of the National Governors Association Center for Best Practices, National Conference of State Legislatures, National Association of State Boards of Education, and Council of Chief State School Officers

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Foreword

The original *Action Agenda for Improving America's High Schools* was released on the eve of the 2005 National Education Summit on High Schools. Since then, governors, legislators, state boards of education, and education chiefs have worked tirelessly to transform industrial-era high schools into 21st-century learning environments so U.S. competitiveness will not be lost. Progress has occurred, but stagnant rates of student achievement remind us that work still remains.

Recognizing this, the four organizations that represent the major education stakeholders within each state first met a year ago and agreed to revisit the *Action Agenda*. We continued to meet to converse, research, debate, and challenge one another. Through that dialogue, this update to the initial report emerged.

Our goal is to help state policymakers accelerate the development of a college- and career-ready policy agenda. This jointly authored report reveals the progress many states have made since 2005 and discusses more recent trends such as the use of international benchmarking and a focus on science, technology, engineering, and mathematics education. Most importantly, it charts the course forward. Moving to enact and implement the recommended actions will require lasting cooperation among all key state partners.

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Executive Summary

The Bureau of Labor Statistics projects that more than half of all new jobs through 2014 will require at least some college experience.[1] Yet scores on the 2008 ACT® national college admission and placement exam suggest that only 22 percent of high school students are likely to succeed in first-year, credit-bearing college courses.[2] Outdated high schools built for a past era are yielding graduates unprepared for today's knowledge-driven economy. Governors, state legislatures, boards of education, education chiefs, and business leaders are responding to this challenge by implementing the policies contained in the landmark 2005 *Action Agenda for Improving America's High Schools.*[3]

Numerous states have begun restoring value to the high school diploma by requiring more demanding courses for high school graduation and by tying academic standards to college entrance expectations. In 2007 more than 800,000 high school students also took at least one college course, while almost 700,000 were enrolled in challenging Advanced Placement courses.[4] No less than 160 innovative early college high schools across 24 states now offer students a five-year path to achieving degrees from both high school and community college.[5] P–16 councils in 38 states help bridge high school and college leadership to better align standards, curricula, and assessments.[6]

Despite these accomplishments, less than three in four students graduate on time because many still lack a rigorous education. Nearly half the states have yet to ask all students to take courses that prepare them for college and the workplace. The result is often high student dropout rates, which cost the nation more than $320 billion in lost wages, taxes, and productivity.[7] Challenges beyond uneven course rigor persist too. High school accountability systems often gauge student performance against a low-level eighth-grade standard, for example, rather than college- and career-ready expectations. Likewise, most states have not yet determined how they can attract a sufficient number of talented educators to help students meet the new expectations.

High schools are not alone in facing these challenges. Postsecondary institutions and industry leaders, too, must share the responsibility for adequately preparing all high school students for the rigors of college and the workplace.

This publication gauges state progress since the release of the 2005 *Action Agenda for Improving America's High Schools* and reiterates that the agenda for state action must continue to center on college- and career-readiness to help maintain U.S. competitiveness.

Specifically, the update offers fresh ideas and new practices, showing state leaders how to:

Restore Value to the High School Diploma by elevating academic standards and high school graduation requirements to a college- and career-ready level; and offering students other high-quality pathways, such as career technical education and dual enrollment, that prepare them for college and entry-level technical occupations.

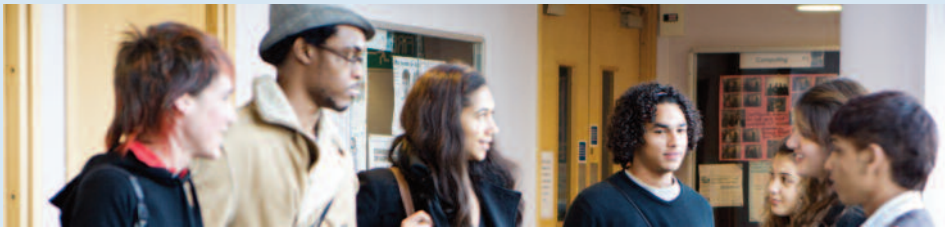
Redesign High Schools by expanding the supply of high-quality schools through new models such as early college high schools and alternative delivery mechanisms such as charter schools and virtual schools; and preventing students from dropping out and reengaging out-of-school youth through youth development programs and alternative high schools.

Improve Schools by Providing Excellent Teachers and Principals by connecting teacher preparation, hiring, and evaluation to student outcomes, among other factors; and empowering principals to hire and assign teachers.

Set Goals, Measure Progress, and Hold High Schools and Colleges Accountable by developing high school accountability systems tied to college- and career-ready measures; and aligning postsecondary expectations, incentives, and performance to high school expectations.

Improve Education Governance by bridging K–12 and postsecondary expectation gaps through the formation of effective P–16 councils.

Most importantly, though, this publication conveys a collective call for action. The four organizations representing the major education stakeholders within each state—the National Governors Association, National Conference of State Legislatures, National Association of State Boards of Education, and Council of Chief State School Officers—have joined forces to advance a comprehensive college- and career-ready policy agenda. This update to the *Action Agenda for Improving America's High Schools* represents the four organizations' shared vision for the changes needed in today's high schools.



1. Renew U.S. Competitiveness

The economic landscape today looks remarkably different than in years past. Now, exporting firms in Phoenix are as apt to be competing with firms in Bangalore, India, Guang Zhou, China, or Dublin, Ireland, as with firms in Austin, Boston, or Seattle. The United States cannot hope to compete with high-skill, low-wage economies across the globe on the basis of costs alone. Instead, it must compete on the basis of innovation—the process by which new ideas enter the economy and change what is produced, how it is produced, and the way production itself is organized.[8]

New technologies create products and services previously unimaginable and revolutionize how the products of a generation ago are produced today. The world has become linked in a way that few thought possible. These changes have brought many American families uncertain job prospects and stagnant income, however, even as they help the economy grow. Many economists are now calling for investments in innovation that will stimulate the growth of the U.S. economy and afford American families a rising standard of living.[9]

One vital ingredient in support of innovation is the accumulated skills, talent, and knowledge of the workforce, often known as "human capital." **Improvements in student learning can dramatically boost economic growth.[10] Overhauling today's high schools offers U.S. policymakers a potent starting point.**

Three years ago, governors and other state officials joined with industry leaders at the 2005 National Education Summit on High Schools to restore value to the high school diploma by orienting standards, curricula, and assessments around college and career expectations. State leaders have responded: 22 states now have academic standards that are tied to college and workplace demands. Moreover, 20 states and the District of Columbia require students to take more rigorous courses for graduation.[11] New vehicles such as charter schools offer students more high-quality high schools almost daily. No state has transformed its accountability system to make graduating all students college- and career-ready the top priority, however, and too few are making complementary investments in effective teacher and principal workforces.

Readiness for college and career remains more relevant today than ever before, because the competition for jobs and talent between the United States and other nations has never been more intense. Consider this startling statistic, for example. If, during the past decade, U.S. high school students led the world in K–12 science and mathematics performance, the nation's gross domestic product would be 2 percent greater than it is today, representing more than $300 billion in additional income every year.[12]

America's position as the world leader in creating innovations and new products and services[13] is compromised by the performance of 15-year-olds in the United States who in 2006 ranked 25th in math achievement and 21st in science achievement, compared with their peers in other nations (see Figure 1).

Figure 1: United States Performance on PISA Examination

	U.S. RANK		
	2000 PISA (27 countries compared)	2003 PISA (29 countries compared)	2006 PISA (30 countries compared)
READING	15th	20th	NA*
MATH	18th	23rd	25th
SCIENCE	14th	19th	21st

*Due to a printing error on the PISA 2006 reading booklets in the U.S., reading performance data for the U.S. were excluded from the PISA database.

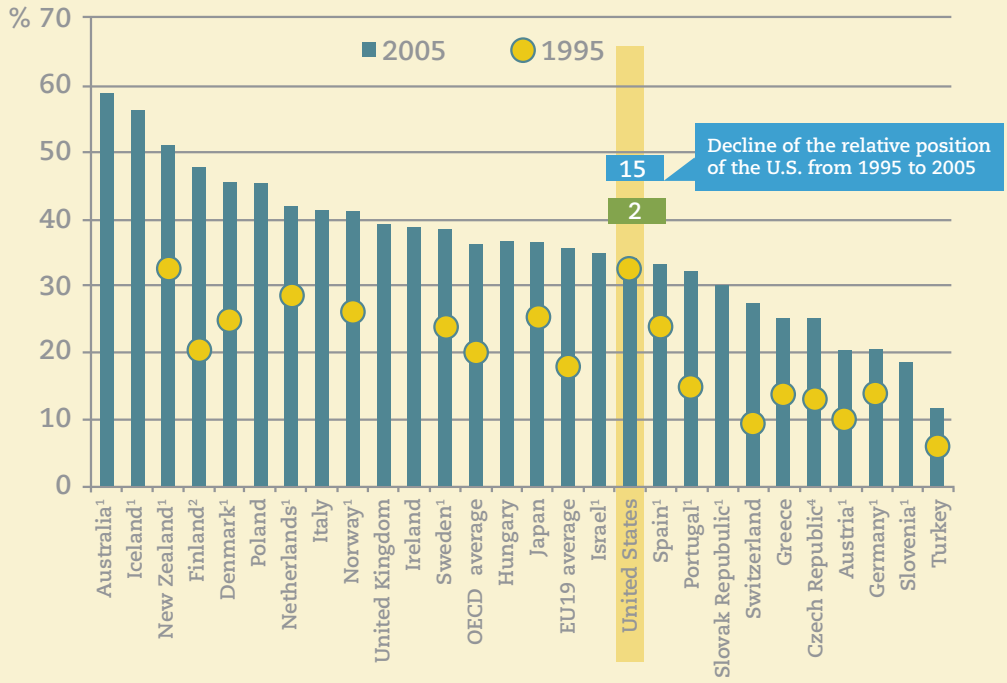
Source: Organisation for Economic Co-operation and Development, 2007.

The United States' competitor nations are learning from the best practices of high-performing nations how to equip more graduates with the skills and knowledge to succeed in today's global economy. Postsecondary attainment rates of those ages 25 to 34 have also suffered, with the Unites States falling in international rankings from second in 1995 to 15th today (see Figure 2).

Exam scores on the recent National Assessment of Educational Progress, which many consider the nation's report card, reinforce these findings. One in five 12th-grade students are proficient in science, less than one in four in mathematics (23 percent) and writing (24 percent), and one in three in reading (35 percent).[14] **This means U.S. students are exiting high school with weaker skills than their counterparts of 20 years ago.**[15] A lack of preparation is felt by postsecondary institutions—which place nearly three out of 10 first-year college students in remedial courses—and in the workplace—where employers report similar deficits in basic mathematics, communication, and problem-solving skills.[16] Even more disturbing, performance averages mask large and persistent achievement gaps for Hispanic, African American, and economically disadvantaged students.

On the nation's current path, global dynamics will hasten this competitive decline. In the next five years, for example, the demand for scientists and engineers will increase at least 70 percent faster than the United States' ability to meet the need.[17] Remarkably, an equal number of students now earn bachelor's degrees in engineering in the United States as in South Korea each year, even though South Korea's population is a mere one-sixth that of the United States.[18]

Figure 2: College-Level Graduation Rates



Source: Organisation for Economic Co-Operation and Development, 2008

As the U.S. economy evolves into a high-skill, high-technology environment, what value does the high school diploma hold today? Clearly, labor demands signal that a diploma is necessary but not sufficient for entry into the workforce. Three out of four jobs now demand at least an associate degree or a bachelor's degree.[19] Moreover, most of these jobs come from the middle of the labor market (i.e., they require more than a high school diploma but less than a four-year degree).[20] Workers who have earned a high school diploma or who have fewer than 12 years of schooling face increasingly bleak prospects.

For states and high schools that embrace this agenda for change and make high school course requirements more rigorous, for example, a diploma will likely propel students into college and then into a career. For states and high schools that resist these reforms, many more students will leave high school in need of college remediation and struggle to secure a decent wage.

As laboratories of innovation, it is up to states to lead this charge for college- and career-readiness (see "'Ready' for What?"). Unlike years past, a student should be able to choose between an entirely academic course of study or a mix of academic, technical, online, and dual-enrollment courses and be prepared equally well for the future. State policy can set this context by ensuring high schools

offer rigorous academics and several pathways for students to become college- and career-ready by graduation as well as by ensuring supports are available for students as they work to meet these higher expectations.

Governors, state legislatures, boards of education, and education chiefs each play a critical role in education policy development, enactment, and implementation. Their roles differ but are overlapping and complementary. For example, governors have significant bully pulpit and agenda-setting power within a state as well as budget responsibilities. Legislatures play a key role in both policy authorization and, of course, appropriations. State boards of education can help drive and manage the education policy agenda through the forces of their public voice, meetings, and legal authority. State chiefs lead the state education agencies that are primarily responsible for the daily business of policy development and implementation. Coordinated action from all these entities will be needed to boost the nation's standing in this new knowledge-driven economy.

"Ready" for What?

Certifying that a high school graduate is college- and career-ready can be a confusing process. Fifteen states have defined *college-readiness* by identifying the test scores, curricula, competencies, or content standards that students should achieve or master. Likewise, 26 states define *career-readiness* through technical content standards, broad and specific skills, academic and technical coursework, or performance on assessment instruments. Only half of the 12 states with both college- and career-ready definitions consider these designations to be substantially different.[21]

Faculty of entry-level college courses emphasize the need for students to be skilled in analysis, interpretation, and application of knowledge, followed closely by key academic skills such as writing.[22] Students who leave high school without an ability to analyze and apply knowledge are unlikely to succeed in first-year college coursework. When asked what they seek in new employees, high-wage employers largely agree with the faculty. They discuss "hard skills," such as mathematics and literacy, and so-called "21st-century skills," such as the ability to solve problems and think critically and other abilities that seem to affect mean labor market earnings the most.[23]

Employers typically add computer-based skills as well as "soft skills," such as communication and group collaboration,[24] to the list of desirable skills for new hires. So while there is growing agreement that the demands of college and career have largely converged in today's global economy,[25] career-readiness may serve as a slightly separate—and perhaps more complex—standard. Although efforts to resolve this dilemma continue, state leaders have not stopped working to raise expectations and move the agenda forward.

2. Restore Value to the High School Diploma

For most, the high school diploma offers little assurance of preparation for college or work. Many students today meet all the requirements for high school graduation but still need remediation at the postsecondary level. In fact, 42 percent of community college freshmen and 20 percent of those in four-year institutions are placed in at least one remedial course[26] at a nationwide cost of $1.4 billion.[27] To restore value to the high school diploma, states need to raise academic standards for all high school students and tie graduation requirements to the skills that colleges and employers expect. Doing so is merely the first step, however. Access to rigorous college-level courses, through the Advanced Placement Program, for example, is uneven at best. Other students remain trapped in low-level vocational tracks, and one in five drops out before ever completing high school.[28]

States can restore value to the high school diploma if they:

- Elevate high school graduation requirements and academic standards to college- and career-ready levels;
- Ensure courses are as rigorous as their titles suggest; and
- Transform career technical education and expand dual-enrollment programs so they become high-quality pathways.

Despite these challenges, more students than ever before now enroll in advanced courses such as Algebra II. Yet ample evidence suggests that the challenging content implied by the course title often falls short.[29] This dilemma is worse for low-income students. In **Texas** 58 percent of low-income students, 67 percent of African American students, and 57 percent of Hispanics who received course credit for Algebra I failed the corresponding end-of-course exam, while the percentages for higher-income and white students were 39 percent and 35 percent, respectively.[30]

States can use quality control measures to ensure challenging course titles reflect academically demanding course content. They can also provide students with multiple high-quality pathways to earn a diploma by making career technical education more rigorous and increasing college-level learning opportunities.

Elevate Academic Standards and High School Graduation Requirements

States need to align their high school standards with the real-world expectations of college and the workplace (see "Progress to Date in Restoring Value to the High School Diploma"). This means, for example, that standards not only should emphasize teamwork and oral presentation, but also stress reading informational materials over reading literature and persuasive writing over narrative writing.[31]

Academic standards are the foundation of a state education system, describing the knowledge and skills that students are expected to acquire at each grade level. Yet state standards in the United States cover more topics at each grade level than any other nation.[32] Teachers—given too many topics to

cover—are left to choose the information they deem most important, creating large variances in the quality of instruction students receive. **State education leaders need to issue academic standards that are fewer in number, clearer in focus, and higher in rigor.**

Setting standards for student performance is not sufficient to ensure students master this information, however. Strengthening high school graduation requirements affords state officials another policy lever to raise student expectations. Completing a challenging sequence of courses leads more students to enter college and complete a degree on time.[33] Taking Algebra I in eighth grade opens doors, for example, while waiting until high school will only reduce the likelihood that students are exposed to serious mathematics.[34] **States that have not yet asked students to take a common set of college- and career-ready courses for graduation should ask every student to do so by specifying the exact course requirements students need for graduation.**

States such as **Arkansas**, **Indiana**, and **South Dakota** have all raised high school graduation requirements to college- and career-ready levels. In these states, students must typically take four years of rigorous English; four years of mathematics, including Algebra I, geometry, Algebra II, and data analysis and statistics; and at least three years of lab sciences, such as biology, chemistry, and physics. Despite automatic placement in these courses, students are able to opt out. Course taking requirements in other states, including **New York** and **Tennessee**, are mandatory. Permitting an opt-out exemption may give schools and districts latitude for initial adjustments; if states elect to follow this path, they should carefully monitor and limit the number of students who opt into less-rigorous courses.

Incentives can support the strengthened high school graduation requirements. Specifically, colleges and employers can encourage students to succeed in more rigorous courses by rewarding performance through admissions, placement, scholarship, and hiring policies. **Georgia**'s HOPE Scholarship, for example, offers financial awards to college students based on their course taking patterns and academic performance while in high school. This popular incentive has increased the number of students taking rigorous courses while reducing the disparity in academic performance among different racial groups.[35] State Scholars programs, now in 24 states, offer similar encouragement for students to take college-preparatory courses during high school, as does the federal Academic Competitiveness Grant Program.[36]

Ensure Course Rigor

Considerable variation exists among courses with the same title. A recent study covering three states found that high schools in sixty districts offer 286 different math courses to high school students with nearly 50 varieties of algebra.[37] Worse, less-demanding remedial "tracks" linger, and courses are often disconnected from important college and career preparation. State policymakers can demand that high school courses be of equal and sufficient rigor. This can be done by assessing the *outputs* (e.g., administering tests that determine whether students have mastered course content), or focusing on *inputs* (e.g., developing statewide model curricula, selectively auditing high school lessons plans, or only approving career technical courses that result in relevant industry certifications).

Leading states now require high school students to take end-of-course assessments in core subject areas (e.g., **Indiana** and **Louisiana**), produce a portfolio of student performance (e.g., **New Hampshire** and **Rhode Island**), or use an assessment tailored to the entrance requirements of the state's university system (e.g., **California**). Although these assessments reflect different approaches, they all aim to generate data on whether student performance meets academic standards and expectations.

Other states ensure course rigor by focusing on inputs such as curriculum. Some states, including **Delaware** and **Massachusetts**, provide teachers with recommended curriculum frameworks based on high school content standards. Delaware's framework includes sample lesson plans, high-quality instructional units, and classroom (or formative) and state-level (summative) assessments. Essentially, it provides teachers with a roadmap that links instructional practice to state standards. **Ultimately, the goal is for states to specify the content taught in these courses, while giving schools and teachers maximum flexibility to engage students and address different learning styles.**

Maine has taken this approach a step further. High school teachers must submit syllabi for review by teams of trained high school and postsecondary faculty. Additional support is then offered to those whose course content fails to meet college- and career-ready expectations.

Finally, states can examine career technical programs to gauge whether sufficient academic rigor is present to reflect emerging industry needs. This can be done by tying technical courses to nationally recognized industry certifications or ensuring course credit articulates to community college. Programs hoping to receive career technical funds, such as in **Vermont**, for example, must result in industry certification or offer dual credit from a postsecondary institution.

Despite differences in approach, **policy strategies that ensure course rigor are becoming increasingly important as states develop multiple pathways to graduation.** Those pathways must include career technical education and dual-enrollment courses.

Retool Career Technical Education

States can create career technical education programs that feed into high-wage, high-skill occupations (see "Connecting High School Redesign with STEM Education"). Career technical education (CTE) offers students alternative pathways to meet academic standards through real-world learning opportunities. **At their best, career technical education courses engage and motivate students and lead to lower dropout rates, higher student achievement, and greater earnings for high school graduates.**[38] To bear fruit, technical courses must build on an academic core that enables postsecondary admission. They must also include a work-based learning component, such as an internship, and offer additional instruction and remediation in reading and mathematics.[39]

The reach of CTE is well documented; in most states, half of all high school students enroll in at least one CTE course, and 21 percent complete the four courses that comprise a typical program of study.[40] Yet to prepare today's high school students for jobs in 21st-century industries, traditional vocational programs that once emphasized trades such as carpentry and welding must evolve into career technical education programs that also emphasize emerging fields such as biotechnology and homeland security.

States can accelerate this evolution by integrating more academic rigor into CTE programs.[41] As part of **Michigan**'s new graduation requirements and curricula standards, for example, students can now meet state English standards through a CTE marketing program. Similarly, **Delaware** and **Louisiana** have aligned CTE standards around new high school graduation requirements. In **Maryland**—a pioneer in developing a new vision for CTE—the rigor of CTE courses has improved to such an extent that 51 percent of students concentrating in a CTE occupational field now meet the state university system's entrance requirements, up from 14 percent a decade ago.[42]

In these leading states, "new" career technical education programs offer valid options for high school students to meet college- and career-ready expectations through applied, hands-on coursework. Not surprisingly, these pathways to advanced training, degrees, and career opportunities are particularly important for high school students who engage in school through real-world applications.

Connecting High School Redesign with STEM Education

Improving science, technology, engineering, and mathematics (STEM) education has received considerable attention as governors and education officials seek to make state education systems internationally competitive. Work in many states to add rigor to high school math and science education is under way, but what of technology and engineering skills? Several promising examples offer insight into how students should be provided access to these disciplines.

Working with **Massachusetts** and **Minnesota**, the National Center for Technological Literacy (NCTL) at the Museum of Science in Boston has developed specific technology and engineering standards and assessments for those states. Pilot testing for NCTL's full-year high school engineering course is also under way. Recently, the global software company PTC partnered with **Minnesota** to design the first statewide Global Engineering Program that prepares high school science and career technical teachers to use computer-aided design tools, connect high schools with local design and manufacturing companies, and develop business partnerships. Similarly, Project Lead the Way (PLTW) was created in 1997 to address the nation's shortage of engineering professionals. Today, 1,700 high schools in 46 states offer PLTW's preengineering program. Students enrolled in this program are more likely to study engineering and related fields in college. In 2005, 80 percent of PLTW graduates went on to college; of these, 68 percent majored in engineering.[43]

Virginia is infusing STEM skills into career technical education programs. The state has created seven Governor's Career Technical Education Academies that will help the general student population acquire STEM literacy, knowledge, and credentials in preparation for high-wage, high-skill occupations. These academies incorporate rigorous academic content with career and technical instruction, include Virginia's Workplace Readiness Skills, emphasize at least two STEM career pathways that reflect both local and statewide needs, and include significant work-based experiences. Academy graduates must complete a college- and work-readiness curriculum and earn at least one or more industry credentials, nine transferable college credits, or an associate degree.

Expand College-Level Learning Opportunities

Dual-enrollment, Advanced Placement, and International Baccalaureate programs enroll high school students in college-level courses. States can expand these collaborative agreements that offer early exposure to the academic demands of college, increase the rigor of a high school experience, and strengthen linkages between secondary and postsecondary systems. **High-quality dual-enrollment programs are a particularly effective way to increase the postsecondary success of underrepresented students and those who may not appear bound for college.**[44] These programs not only make college more affordable by offering postsecondary courses at free or reduced rates, but also enable rural states to use community colleges to supplement gaps in high school capacity.

Dual-enrollment policies in 42 states benefit more than 800,000 high school students each year. **Florida**'s dual-enrollment programs have increased enrollment in that state's colleges by 7.7 percent for all students and 8.6 percent for career technical education students while improving postsecondary persistence and completion.[45]

Advanced Placement courses are another way to extend college-level learning opportunities to every high school student, not just the privileged few. In just two years, for example, the participation of **Maine** and **Nevada** in a National Governors Association-sponsored pilot project increased the number of low-income students in participating schools who take Advanced Placement courses by 80 percent. In Nevada the number of minority students taking at least one AP course doubled; in Maine it tripled.[46] The number of students at "mastery"—defined as a score of three or above on the AP exam—accelerated faster than the national average. Achieving these growth targets is not simple. Both states provide intensive professional development to help teachers improve their content knowledge. Moreover, they have established mentorship programs for new AP teachers, waived student AP exam fees, and created summer academies.

State leaders have other policy levers to encourage the growth of dual-enrollment and AP courses. To accelerate learning for struggling students, for example, **New Mexico**'s recent high school redesign legislation requires all high school students to take a dual-credit, Advanced Placement, or distance learning course to graduate. Likewise, 2005 legislation in **Arkansas** compels all high schools to offer AP courses in the four core content areas. Today, two-thirds of all high schools offer at least one AP course.[47] Enrollment continues to grow, increasing from 473,000 students who took at least one AP exam in 2000 to 698,000 students who took at least one AP exam in 2007. The number of students scoring at "mastery" on the exam (i.e., achieved a score of three or above) also increased from 260,000 to 425,000.[48]

While state leaders work to expand access, they need to ensure course quality remains at a college level. States such as **Pennsylvania** and **Utah** are addressing this concern by basing student eligibility on academic preparedness, carefully monitoring both course syllabi and instructor credentials, and using improved data systems to track student performance. Another popular strategy is to examine postsecondary remediation rates for students in dual-enrollment courses. **Rhode Island** undertook

a broad examination of dual-enrollment programs that led to a dual-enrollment coordinator position in the office of higher education, statewide articulation agreements, and a new "College 101" course that prepares low-income and minority students for college success.

Progress to Date in Restoring Value to the High School Diploma

State education leaders are establishing academic standards in English and mathematics that more accurately reflect the real-world expectations of colleges and employers.[49] Twenty-two states have now aligned their high school standards with these expectations, and similar work is under way in 23 more states. Twenty states and the District of Columbia, up from just two states in 2004, now require high school students to complete a college- and career-ready curriculum to earn a diploma. Ten additional states are now taking steps to implement similarly challenging graduation requirements.[50]

Assessments of college- and career-readiness, too, are on the rise. Up from only one state in 2002, nine states now require all students to take at least one college- and career-ready test, such as an end-of-course exam or a college admissions test. This number is expected to grow by 23 states in the near future. These new exams move from measuring skills taught early in high school to more precisely gauging college- and career-readiness. Finally, a growing number of postsecondary systems are following New York's lead in using high school exams to also place students in appropriate postsecondary courses.[51]

3. Redesign High Schools

The factory model that led to one-size-fits-all high schools is an outdated notion. Instead, states should develop a "portfolio" of different high schools. Designs can vary, from large comprehensive high schools to smaller learning communities with specialized programs in areas such as finance, health sciences, and the arts. Designs can also include career technical centers, virtual high schools, early college high schools, and new small high schools with diverse instructional philosophies. For these schools, preparing every student for college, careers, and citizenship should be the overriding goal.

Notwithstanding the steady growth of promising new high schools, more than 2,000 high schools have dropout rates of over 60 percent.[52] Ensuring these schools will be transformed or closed is a state responsibility. Data systems now enable these chronically failing schools to be identified. Policymakers can respond by seeding innovative practices, evaluating progress, sustaining promising efforts, replicating effective models, and closing persistently failing high schools.

States can redesign high schools if they:

- Expand the supply of high-quality high schools;
- Identify struggling students and provide targeted supports; and
- Reengage out-of-school youth.

Many high schools remain too impersonal and inflexible, alienating students who most need additional help. Meeting these students' needs entails further academic and social support so they can catch up and succeed. In some cases, entirely new approaches must be developed that reengage students who have dropped out of school.

Expand the Supply of High-Quality High Schools

States can expand the supply of high-quality high schools by using alternative delivery mechanisms, career-themed schools, and early college models that blend high school and community college (see "Progress to Date in Expanding the Supply of High-Quality High Schools"). An impressive array of new school models, including the Knowledge Is Power Program, Green Dot Public Schools, Hi Tech High, and other STEM-focused academies, are producing remarkable results in the nation's most underserved communities. Where this work occurs at scale, in states such as **Indiana**, **North Carolina**, and **Texas**, and cities such as Chicago, Los Angeles, and New York City, policymakers are successfully creating new, high-quality education options for low-income families.

Alternative delivery mechanisms such as charter schools and virtual schools offer the means to expand new school models. To promote charter schools, policymakers need to find ways to ease caps that restrict charter growth while still ensuring charter quality.[53] Policymakers can also evaluate school performance, offer consequences for failure, and nurture successful pilot ventures by offering seed funding to education entrepreneurs. In **New York**, for example, policymakers recently doubled the

number of allowed charter schools from 100 to 200. This legislation addresses other challenges to growth by maintaining the current level of charter and per-pupil funding, ending mandates that ask charter providers to use higher-cost buildings or services, and funding a year of planning for all newly approved charters. Worth watching, a more transparent and rigorous authorizing process is under development in **Arizona**.

Like charters, virtual schools can deliver rigorous high school curriculum, increase access to Advanced Placement courses, and offer remedial courses. Although the quality of virtual schools varies considerably, students who take these online courses perform the same as those in the classroom.[54] In the 2005–2006 school year, 700,000 high school students took at least one course online, which is double the enrollment from a mere three years before.[55] Today more than two dozen states have established state-run virtual high school programs that use technology to extend required courses such as physics and calculus to isolated rural communities as well as to offer specialized coursework such as Chinese language training. A new analysis from Harvard Business School estimates the share of high school instruction that occurs online will rise sharply, until online courses constitute more than 50 percent of all high school course enrollments by 2019.[56]

Virtual schools also play an important role in equalizing access to advanced classes, because more than a quarter of U.S. high school students still have no advanced courses available at their home school. Moreover, students in rural schools and schools with low enrollment have the least opportunity to take one or more advanced courses in math, science, English, or a foreign language.[57]

Career-themed academies also merit consideration. Although test scores in these academies are the same as in other schools, this model produces improved graduation and postsecondary enrollment rates, higher future earnings, and employment stability for young men, in particular.[58] STEM-focused high schools, too, are increasingly popular. As state policymakers create new courses for high-wage, high-skill occupations (e.g., accounting and Web design), career academies in states such as **Hawaii**, **Ohio**, **Texas**, and **Virginia** are moving to the forefront of school redesign efforts; more than 2,500 such academies now exist nationwide.

Finally, "blended" early college high schools encourage 11th- and 12th-grade students to take postsecondary courses while still in high school. An early college high school enables students to obtain a high school diploma and an associate degree or two years of transferable university credit with just one additional year of study. These schools have also been effective in increasing postsecondary matriculation rates among minority and low-income students.[59] Moreover, for every $1.00 invested in an early college high school, the state will save between $1.33 and $2.11 during a 15-year period through increased education attainment and the foregone year of education.[60] In **Texas**, 21 early college high schools have been opened in two years and have an average daily attendance of 97 percent.

Identify and Support Struggling Students

Academic preparation matters greatly, and states need to ensure student supports are available in all high schools. Ninth graders who enter high school two or more years behind grade level in literacy and mathematics have a fifty-fifty chance of being promoted to 10th grade on time.[61] In contrast, low-

income students who acquire strong math skills by the eighth grade are 10 times more likely to finish college than their peers.[62]

An effective statewide support system can improve student performance by tailoring interventions to students' needs.[63] The first step is to gather data that help educators identify academic trends and enable policymakers to target resources more efficiently.[64] Such data not only should describe the academic proficiency of students, but also foretell their high school outcomes long before they enter ninth grade based on their sixth-grade math and literacy performance as well as attendance and effort rates.[65]

"Early warning" data systems collect leading indicators of student dropout rates, and sharing this information allows middle and high school educators to more accurately target academic supports, structural interventions, and funding decisions. Every high school in **Louisiana** will have access to such information by the 2008–2009 school year, helping school principals target programs that ease the transition to high school. Postsecondary institutions, too, should share college remediation and persistence data with "feeder" high schools. Again, the aim is to provide information that can change instructional practice and curricular alignment.

Good data also inform the development of academic supports, which are key to help struggling students succeed in challenging courses. States can consider supports such as accelerating learning opportunities and extending learning time that enable additional remedial instruction for struggling students, personalized learning environments that offer smaller learning communities and individualized support systems, dropout prevention programs, and programs that infuse literacy across the middle and high school curriculum to improve adolescent reading skills.

State leaders can fund the development, testing, and expansion of these interventions. They can also provide resources and technical assistance to help schools and districts intervene at scale. Consider these examples:

- An accelerated "catch up" curriculum in **Louisiana** targets high school students struggling in reading and mathematics by offering double doses of instruction. Early results show participating ninth graders are more likely to achieve "basic" on the state math exam.[66]
- A pioneering effort in **Massachusetts** extends the school day by at least 25 percent and increases the time available for core academics, enrichment activities, and teacher planning and professional development. For participating schools, use of the extended time doubled the percent of students reaching "adequate yearly progress" in mathematics and increased the number in English by 40 percent. Use of the extended time also narrowed the achievement gap between these students' English exam scores and the state average for students by 7 percentage points.[67]
- Web-based individual learning plans in **Delaware** and **Kentucky** help high school students design a course of study to meet their college and career goals.

- Graduation coaches in every high school in **Georgia** work to help entering ninth-grade students and others struggling to adjust and have increased statewide high school graduation rates by 9 percent.
- **Florida**, **North Carolina**, **Pennsylvania**, and **South Carolina** have placed literacy coaches in some of their lowest-performing middle schools and high schools, resulting in better-equipped teachers, improved classroom practices, and more engaged students.[68]

As support systems are being implemented, state policymakers need to consider how scarce resources will be allocated. Some supports, such as an individual learning plan, serve all students and have statewide effects. Other supports, such as literacy coaches, are higher-cost options and can be targeted to persistently underperforming schools. One strategy under consideration in states such as **Hawaii** and **New Jersey** is adopting a weighted student funding formula that provides extra resources for students in greatest need; such a strategy may provide high-need schools with additional funding for systems of student support.

Reengage Out-of-School Youth

Despite supports that prevent many high school students from dropping out, one in five still leaves prematurely.[69] High school graduation rates are 15 percent lower in urban schools than in suburban schools.[70] Dropouts are less likely to be employed, more likely to receive public assistance, and more likely to be incarcerated. On average, each high school dropout costs the public sector $139,100 in reduced tax payments, $40,500 in increased public health costs, $26,600 from increased criminal activity, and $3,000 in increased welfare costs over the course of a lifetime.[71]

Alongside the students who drop out of school are the students who fail to graduate on time, numbering approximately 1.2 million in 2007 alone.[72] States can support high-quality dropout recovery programs that reengage out-of-school youth and ultimately confer a high school diploma or an alternative credential. Such programs offer a safety net, providing dropouts with another chance for high school success. Many students take advantage of their second chance, with more than half of those who drop out of school eventually earning a high school diploma or an alternative credential (e.g., a general educational development [GED] certificate).[73]

Dropout recovery programs vary considerably, but successful programs are typically flexible, link to postsecondary education and employment, and provide strong student supports.[74] YouthBuild U.S.A. works with high school dropouts, for example, training them to build affordable housing while also strengthening basic academic and critical-thinking skills. Most graduates of this program receive a high school diploma (nearly 51 percent) or a GED (20 percent), and 43 percent go on to college.[75] Currently, however, the demand for dropout recovery programs may surpass the capacity to deliver them. Although 3.8 million youth are without a diploma, not in school, and not working, fewer than 200,000 seats are available in alternative education programs nationally.[76]

To provide more second-chance opportunities, state education systems can create incentives for schools to reengage students, provide new school models specifically for overage and undercredited youth, and permit schools to award credit based on performance and competency rather than seat time. In **Oregon**, for example, residents can receive a publicly funded education until they receive a high school diploma or reach age 21. School districts are encouraged to establish alternative education options within their system or contract with qualified providers. Districts that enroll students in private alternative education programs receive full state funding for each student.

New Hampshire recently launched a dropout recovery effort by expanding alternative education programs, adult education, technology-based learning, internships, work-based learning opportunities, and other programs designed specifically for at-risk students. Legislation recently enacted in **Texas** increases student eligibility for elementary and secondary education funding, up to age 25, while affording those on nontraditional schedules greater flexibility to meet academic requirements.

Finally, state leaders can encourage dropout recovery programs to provide students with traditional high school diplomas instead of an alternative credential such as a GED. Students receiving these diplomas are more likely to be employed and have greater earnings.

Progress to Date in Expanding the Supply of High-Quality High Schools

The supply of high-quality high schools is expanding, and a few states have now made the leap to conduct this work at scale. In **North Carolina**, for example, 60 early college high schools operate on university and community college campuses, with 11 more slated to open in 2008. More than 160 early college high schools now exist across 24 states; more than 250 of these schools are expected to serve 100,000 students by the end of the decade.[77] Although this new and innovative model is particularly effective in educating high-poverty students,[78] early college high schools still meet only a fraction of the need.

Elsewhere, states are undertaking the wholesale transformation of existing schools. **Pennsylvania**'s Project 720—named after the number of hours a student spends in high school—started with 41 high schools and has expanded to 148 in 2007–2008, including many rural schools. Participating high schools receive additional funds to ensure every student takes a college-preparatory curriculum, increase professional development, create small-school arrangements, and provide dual-enrollment options. As a result, more ninth-grade students have enrolled in algebra, additional Advanced Placement courses are now offered, and more students receive personalized career and college counseling.

4. Improve Schools by Providing Excellent Teachers and Principals

To improve the effectiveness of their teacher and principal workforce, states can:

- Recruit and retain a larger supply of effective teachers by redesigning teacher compensation and upgrading working conditions;
- Link professional development to student achievement; and
- Empower principals to manage school improvement.

Effective teaching is the single most important school-based factor in determining student achievement. For example, nearly half of the variation in test scores between white and minority students in **Texas** was due to differences in teacher quality.[79] Teacher shortages in science, mathematics, and foreign languages, in particular, leave low-income students with inexperienced teachers who lack specific training.[80]

In addition, the cumulative cost of teacher turnover is estimated to be more than $7.3 billion.[81] Despite efforts to increase exposure to rigorous STEM coursework, school principals in 31 of the nation's 50 largest school districts are explicitly prohibited by labor agreements from rewarding teachers in these hard-to-staff subject areas.[82] To close these achievement gaps and enable all high school students to meet college- and career-ready expectations, state leaders need to launch a human capital strategy to recruit and prepare outstanding high school teachers and principals, deploying that talent where it is needed most (see "Progress to Date in Attracting and Retaining Quality Educators").

No state has yet undertaken a comprehensive effort to upgrade the effectiveness of their high school teacher and principal workforce. States can access multiple policy levers to increase the number of quality teachers and help school leaders appropriately allocate these human resources. Without a renewed focus on teachers and principals, efforts to fix the American high school will likely fall short.

Increase the Supply of Effective Teachers

To close gaps in teacher quality, states must first identify their workforce needs. They can then boost teacher supply by strengthening teacher preparation programs, expanding routes to teaching, designing new compensation models, and retaining teachers through improved working conditions. Near- and long-term staffing projections are needed to identify workforce shortages. This requires a longitudinal data system that can capture critical human resource information. Toward this end, **Georgia**'s educator workforce research and development division provides annual reports on the production of, supply of, and demand for educators by subject field, grade level, and geographic area.

Once workforce needs are known, states can turn their attention to strengthening teacher preparation programs to provide an adequate supply of effective teachers. Despite a tenfold increase in the number of teachers certified via alternate route programs,[83] most teachers and principals are still trained at traditional "teacher" universities. Sadly, as many as three-quarters of these programs have inadequate

curricula, low admission and graduation standards, faculty members who are disconnected from K–12 schools, and insufficient quality control measures.[84]

Louisiana has developed an accountability system that asks colleges and universities—not just the teacher education program but the entire institution—to produce an adequate supply of effective teachers in high-need subject areas. The state publicly rates the teacher education program within each public postsecondary institution according to its overall program quality and the number of teachers it produces in critical shortage areas. As a result, state policymakers and education officials can now determine which teacher preparation programs produce graduates who measurably improve student achievement.[85]

Alternate routes to teaching should not be ignored, because they supplement teacher education programs by training talented noneducators to teach in high-need areas. For example, **Virginia**'s Career Switchers Program offers fast-track licensure, which allows adults who lack formal teacher training but have considerable life experience and academic preparation to become teachers. Combining online and on-site instruction, state community colleges train and certify these noneducators, giving priority to those who teach in critical shortage areas.

Pay is also important to increasing teacher supply; new compensation models promise to stem the large number of teachers who leave positions in critical high school subject areas for higher-paying jobs elsewhere. States can remunerate teachers who improve student performance, take on challenging assignments, or demonstrate specialized knowledge.[86] Teacher career ladders, too, can improve student performance. Essentially, a career ladder is a performance-based compensation plan that provides incentives to teachers who choose to make career advancements without leaving the classroom or the profession. On average, students in **Arizona** schools with career ladder programs performed significantly better on state exams.[87]

How can states put these strategies into practice? **Ohio** recently tied a comprehensive human capital agenda to college- and career-ready expectations. The state's $120 million investment bolsters newly raised high school graduation requirements by retraining mid-career STEM professionals, providing financial incentives to new teachers in high-need settings, coaching new teachers online, and encouraging high school students to explore teaching careers.

Rethink Professional Development Investments

Roughly $14 billion is spent on teacher professional development each year, but most states and school districts cannot gauge the effects of these investments.[88] Professional development, especially for high school teachers, needs to be closely linked to student performance data, tied to higher-level coursework, and be specific enough for teachers to master gaps in content knowledge in their subject area.

States can tie ongoing professional development investments to scores on college- and career-ready assessments, for example. In addition, they can use data from end-of-course exams to make instructional improvements aimed at increasing student performance, as has been done by education leaders in Wake County, North Carolina.

The escalating number of college-level courses can challenge even veteran teachers. Where these teachers lack the skills and knowledge to help high school students meet college- and career-ready expectations, state policymakers can consider investments that update the educators' knowledge base. One creative response under way in **Wisconsin** offers teachers an intensive week-long professional development course that prepares aspiring AP teachers to meet demands for more college-level courses.

Finally, professional development investments can be tailored to high school teaching assignments. In **Alabama**'s Math Science Technology Initiative, for example, 10th-grade biology teachers together learn to incorporate literacy and numeracy skills into their biology curricula. Students in participating schools now have higher scores on the SAT and the state's high school exit exam.[89]

Tie Teacher Evaluation to Student Outcomes

Key to effective teachers is an evaluation system that can isolate individual teacher effects on student learning over time. A dozen states can now tie teacher evaluation to student achievement.[90] Elsewhere, school leaders making critical hiring and promotion decisions depend on incomplete proxies for teacher effectiveness, such as degrees earned or licensure exam scores.[91] Classroom observations, student portfolios, and end-of-course assessments can supplement value-added evaluations.[92]

Connecticut's first-in-the-nation teacher evaluation system combines two years of mentoring and training for new teachers with an evaluation of performance based on state instructional standards. All teachers must earn a satisfactory rating before becoming fully licensed. Students of the teachers who earned top scores gained three additional months of learning over the year.[93] **New Mexico** and **Wisconsin** recently adopted similar approaches to evaluate teachers.

Empower Principals to Manage School Improvement

If high school principals are to help every student meet college- and career-ready expectations, they must first serve as instructional leaders, using data to guide teachers and manage workforce decisions. School leaders in the world's top-performing school systems spend 80 percent of the school day helping their teacher workforce improve instruction.[94] Too often, though, principals in the United States report they are too busy responding to managerial and administrative concerns to help teachers.[95] This concern can be addressed by providing administrative support that frees high school principals to manage staff and instruction. In Jefferson County, Kentucky, for example, the newly created position of "school administrative manager" enables Louisville principals to spend 70 percent of their time directly on instructional leadership.[96]

How principals use this time for instructional leadership matters greatly. School leaders today enjoy unprecedented access to student data, from sources such as "early warning" data systems that can identify students likely to drop out. However, fewer than 5 percent of principal preparation programs teach principals how to use data in managing school improvement.[97] States need to ensure that principal preparation programs not only offer specific training in data analysis, but also enable new principals to learn from veteran school leaders. **Virginia**'s Darden-Curry Partnership for Leaders in Education draws on the school's education and business programs to train school administrators who will lead low-performing schools.

Regulatory or contractual barriers can prevent principals from effectively managing staff. Even the most data-savvy principal with sufficient time to lead likely cannot hire and assign teachers. Taking their cue from recent legislation in **California** that frees school leaders to reject forced teacher transfers, other states can lift regulatory barriers that now prohibit principals from assigning teachers in ways that benefit student learning. This new flexibility comes at a price, however, because school leaders are then expected to reduce truancy, retain staff, improve student achievement, and increase on-time graduation.

Progress to Date in Attracting and Retaining Quality Educators

Several states seek to compensate effective teachers and principals beyond the single-salary schedule. Eleven states now reward teachers for improving student performance. Qualified high school science and mathematics teachers are in very short supply,[98] and low pay makes them twice as likely as teachers in other subjects to leave their profession.[99] Twenty-eight states now offer additional pay to teachers who work in hard-to-staff schools or teach subject areas in which staffing shortages exist.[100]

A few states also allow school principals to hire and evaluate classroom teachers. In 2006, **California** gave principals in low-performing schools greater authority over teacher hiring, allowing them to refuse teacher transfer requests if these requests endangered school improvement efforts. Moreover, seniority-based transfers now occur before mid-April to give principals additional time to interview and select qualified candidates. **Massachusetts** and **Nevada** have recently adopted similar approaches to New York City's empowerment school zones, where principals agree to school performance goals in exchange for greater authority over curriculum, school hours, and management of the staff and budget.

5. Set Goals, Measure Progress, and Hold High Schools and Colleges Accountable

State leaders face increased pressure from both federal law and standards-based reform efforts to ensure all students graduate from high school ready for college and careers. States often struggle to keep pace with these accountability demands. For example, most high school exit exams—given in 10th or 11th grade—measure low-level math and literacy skills, rather than the knowledge actually required to succeed in first-year college courses. States need to revise their high school accountability system to make college- and career-readiness the central mission. This system can set goals for improving readiness; assess progress using college- and career-ready measures and other indicators such as graduation rates; guide specific decisions on resource allocation and supports; and intervene, when necessary.

State leaders can hold high schools and colleges jointly accountable if they:

- Focus accountability structures around college- and career-ready expectations;
- Benchmark performance against a valid, external standard;
- intervene in struggling schools; and
- Align postsecondary expectations, incentives, and performance with high school expectations.

American colleges and universities, too, bear greater responsibility for the readiness of high school students to do college-level work. They must focus on the quality of the teachers they produce, the incentives they create through student financial aid, and the signals they send students with postsecondary entrance requirements.

Strengthen High School Accountability

States can require that high schools be accountable for graduating students on time and prepared for college and careers (see "Progress to Date in Strengthening High School Accountability"). Doing so first requires better measures of readiness—such as value-added assessments that more accurately gauge individual student progress over time—as well as careful development of an accountability system.

Work in states such as **Indiana**, **Louisiana**, and **North Carolina** shows that a state high school accountability system can go beyond measuring low-level skills. These states have set transparent performance goals, created indicators and benchmarks of on-time high school graduation and college- and career-readiness, and are in the early stages of measuring student and system progress using new assessment mechanisms such as end-of-course exams.

Many states continue to use comprehensive exit exams that assess only 8th-, 9th-, and 10th-grade skills or, worse, require no readiness assessments at all. **Half of the state tests administered each year do not align with state academic standards.**[101] To address misaligned expectations, leading states are now pursuing three main policy options. A few states (e.g., **Illinois**, **Maine**, and **Michigan**) now require all high school students to take an adapted off-the-shelf exam—usually the ACT or SAT—to gauge levels of readiness. **Minnesota** has expanded this strategy to administer all eighth-grade students ACT Explore®, an early college-readiness assessment designed to support a student's transition to high school.

Other states, including **Indiana**, have created their own end-of-course assessment exams that align with state standards in core subject areas. Finally, **California** is at the forefront of an emerging trend to require state postsecondary systems and K–12 representatives to collaborate in creating and managing an assessment tailored to the expectations of the state's university system.

As concerns about too much testing grow, states and districts need to become smarter about how they test students. An "anchor" assessment rests at the heart of a testing system to help district and state policymakers gauge whether students understand key subject areas and are college- and career-ready. This assessment can be used for reporting student and school results publicly, determining accountability, and allocating limited resources. Based on this assessment, state and district education officials can then develop "periodic" or "formative" assessments, which teachers can use to gauge student understanding of a particular lesson plan, and "interim" assessments, which teachers can use to measure student understanding of a larger thematic unit.

Without accurate comparisons, assessment information exists in a vacuum. Consequently, states also need to benchmark the performance of schools, districts, and states against a valid external standard. For example, many states now weigh academic standards against the American Diploma Project's English and mathematics benchmarks that describe the information high school graduates must master to succeed in postsecondary education or high-growth jobs.

Other states, including **Mississippi**, benchmark standards and performance against the National Assessment of Educational Progress. Finally, state performance can also be benchmarked internationally (see "State Strategies for International Benchmarking"). Ohio recently commissioned a study to compare its education policies against best-in-class international practices.[102]

Once a reliable benchmark is identified, state leaders are then able to measure progress and reinforce system objectives. For example, a high school accountability system should consider the percentage of students who graduate on time, complete a college- and career-ready curriculum, enroll in college and/or earn an industry-recognized skill credential, and need remediation after enrolling in two- or four-year colleges. Some states, including **Georgia**, **Louisiana**, **Oklahoma**, and **Virginia**, are at the forefront in factoring metrics such as these into their accountability system. These measures also help

guide state policymakers when allocating limited resources for, for example, professional development or dropout prevention programs, and identifying high schools that require more intensive intervention.

Data on high school performance should also be publicly accessible, user-friendly, and carry consequences. In **Colorado**, online report cards now provide information on college-readiness and enable parents and the public to compare individual schools by student achievement; student-to-staff ratios; and other characteristics, such as whether after-school programs are offered. In **New Mexico**, performance on the eighth-grade examination and attendance during the ninth grade affect students' eligibility for a driver's license.

State Strategies for International Benchmarking

Around the globe, governments are eagerly comparing their students' education outcomes with those of their peers in other nations. The goal not only is to see how the school system ranks, but also to identify and learn from top performers and rapid improvers. The process is known as "international benchmarking," and it has become a critical tool for nations and states striving to create a world-class education system.

The National Governors Association, the Council of Chief State School Officers, and Achieve, Inc., have joined to provide states with a roadmap for benchmarking their K–12 education systems to those of top-performing nations. State leaders already are engaged in efforts to raise standards, improve teaching quality, and help low-performing schools and students improve. International benchmarking provides another option for making that process more effective by providing insights and ideas that cannot be garnered solely from looking within and across state lines.

Turn Around Struggling High Schools

To turn around chronically low-performing high schools, state leaders need to be willing to close the worst performers. Approximately 5 percent of America's public schools—representing more than 2,500,000 students—are expected to receive the most extreme designation of failure under federal law in 2009–2010.[103]

Three elements appear critical to successfully turning around struggling schools:

- Changing conditions for reform by establishing zones that free schools and districts from bureaucracy and afford leaders additional flexibility and authority to hire, fire, and budget;
- Building state capacity through partnerships among the state, school districts, and external partners to redesign schools; and
- Clustering high schools with similar needs into networks to facilitate efficient support.[104]

Louisiana created a turnaround zone in 2003 called the "Recovery School District." This zone allows the state to take over any school identified as "failing" under the state's school accountability index for four or more years. The district provides supervision, operation, and management to bring the failing school to a higher level of performance. Often, this means contracting with a charter management organization to run the school directly. Currently, 107 schools are in the district, with 168 projected to be in the district by the 2009–2010 school year. Once schools are placed in this zone, the state is able to put new leadership teams in place, manage curricula more tightly, and provide additional resources for extended-day programs and technology investments.

Help Secondary and Postsecondary Systems Partner to Improve High School Performance

States can insist that the secondary and postsecondary education systems share responsibility for college- and career-readiness. This can be done by tying postsecondary entrance requirements to high school graduation expectations, expanding college access and outreach, and revising financial incentives and admissions requirements to encourage high school students to take rigorous courses.

Misaligned high school exit and college entrance requirements cause students to mistakenly believe they are prepared for college. As a result, one in four students enrolled in a four-year college, and nearly half of all those in community college, fail to return after the first year. Texas has been proactive in addressing the 50 percent of freshman who require remediation upon entrance to higher education institutions in the state. New college-readiness standards passed by the Texas Higher Education Coordinating Board identify the skills for success in state colleges or universities.[105] The state has also developed entry-level courses and companion senior seminars at the high school level. South Carolina hopes to raise completion rates by matching 12th-grade faculty with those teaching entry-level college courses to develop "paired courses" so student learning can transition seamlessly from high school to college.

States can also provide financial incentives for postsecondary leaders to work with local education officials and high school faculty to improve college-readiness. In 2005, Virginia offered all public postsecondary institutions greater autonomy and financial incentives to realign their goals with the state's call for improved readiness of high school graduates. As a result, more higher education institutions now partner with K–12 education to enhance access, improve affordability, and measure progress. For the first time, postsecondary funding in Texas is based, in part, on outputs, not just student enrollment. Public higher education institutions now receive a total of $100 million for increasing the number of students who attain degrees in critical fields. This funding encourages postsecondary institutions to help more at-risk high school students to graduate on time and pass exit exams.

Progress to Date in Strengthening High School Accountability

Though state and federal education assessment policies focus primarily on elementary schools and middle schools, a few states are creating robust high school accountability policies that drive student achievement. Nine states now require their students to take assessments sufficiently rigorous to measure college- and career-readiness; planning is underway in 23 more states to offer new or upgraded high school assessments.[106] Eighteen states now report a more accurate high school graduation rate, with 20 more states preparing to do so by 2010.[107]

State longitudinal data systems undergird high school accountability structures, and these systems are growing more sophisticated. In 2003, for example, only nine states could collect information on high school transcript completion and just six states aggregated results from SAT, ACT, and Advanced Placement exams. Moreover, fewer than 10 states could link K–12 student records to college enrollment data. Today, this picture looks quite different: 16 states collect course completion information, 15 collect college-readiness test scores, and 22 can link high school student records to college enrollment data.[108]

Postsecondary institutions are becoming more adept partners with K–12 education. Twenty two states have now aligned high school standards with postsecondary expectations—almost doubling the number from a year ago—while work is under way in 23 more states.[109]

States that require college- and career- ready assessment.	California, Colorado, Illinois, Kentucky, Maine, Michigan, New York, Tennessee, and Texas.
States that report a more accurate graduation rate.	Arizona, Arkansas, Colorado, Delaware, Florida, Indiana, Louisiana, Massachusetts, Michigan*, Minnesota, Mississippi, New York, North Carolina, Rhode Island, South Carolina, Texas, Vermont, and Virginia*.
States that align high school standards with postsecondary expectations.	Arizona**, Arkansas, California, Delaware, Georgia, Indiana, Kentucky, Louisiana, Maine, Maryland**, Michigan, Minnesota, Mississippi, Nebraska, New Jersey, New York, Ohio, Oklahoma, Rhode Island, Tennessee, Washington**, and West Virginia.

*The announcement of the new graduation rate calculation occurred after the release of the NGA Center's 2008 Graduation Counts report. Michigan Office of the State Budget, "New, Accurate Measure of Graduation Rates" Press Release, 8/25/08; personal communication with Bethann Canada, Director, Educational Information Management, Virginia Department of Education, 10/6/ 08.

** Personal communication: American Diploma Project Leadership Team meeting, 9/11/08.

6. Improve Education Governance

Governors, state legislators, and state boards of education are uniquely positioned to improve K–16 education coordination by encouraging system heads to collaborate on cross-sector challenges such as standard setting, assessments, teacher education, and accountability mechanisms (see "Progress to Date in Improving Education Governance"). Recent history suggests high school redesign efforts are most successful when governors, legislators, board members, and chiefs coalesce around a shared goal of college- and career-readiness.

To improve education governance, state leaders can:

- Link K–12 and postsecondary data;
- Ask postsecondary and K–12 systems to jointly develop curricula and assessments around college- and career-readiness skills;
- Establish effective P–16 councils with representation from the education and business sectors.

Link K–12 and Postsecondary Data Systems

State policymakers, education officials, and business leaders need access to P–16 data to properly identify weaknesses in student transitions, share readiness challenges, and develop collaborative solutions. The 2006 Commission on the Future of Higher Education echoed this call, saying, "The lack of useful data and accountability hinders policymakers and the public from making informed decisions."[110] Longitudinal data systems can provide postsecondary leaders with information on, for example, the effectiveness of teacher education schools. These data systems can also show K–12 education leaders how high school graduates perform once in college. Sharing and using these data are essential first steps toward meaningful cross-sector collaboration to improve college- and career-readiness.

No shortage of data exists in the education system today. The data elements for a strong accountability system are already present in many states. However, these elements are frequently scattered across multiple jurisdictions and reports. A longitudinal data system that can follow students over time must be developed. The Data Quality Campaign has identified 10 essential elements of a state longitudinal education data system; central to this system is the use of a unique student identifier.[111] States are making considerable progress in building these data systems, allowing them to share and link data between K-12 and postsecondary systems while protecting individual privacy.

A growing number of states can now link data from many sources to answer important policy questions. Twenty-seven states, for example, can determine what percentage of high school graduates take remedial courses in college, while 16 states can answer which teacher preparation programs produce the graduates whose students have the strongest academic growth. State data infrastructure investments are occurring because states recognize that linking and using these data are critical to helping policymakers pursue education goals.

Create Effective P–16 Councils

State leaders can encourage officials from the elementary and secondary education and postsecondary education systems, economic development agencies, and workforce boards to better coordinate their high school policy efforts by creating a P–16 council.[112] Just since 2005, 24 states have created such a council through legislation or an executive order, bringing to 38 the total number of states with a P–16 council. These councils help ease student transitions, create meaningful college- and career-readiness measures, and share data.[113] In most states, the elementary and secondary education and postsecondary education sectors are governed, financed, and operated independently and are often overseen by different boards or legislative committees,[114] making it difficult to coordinate high school exit policies with postsecondary entrance policies.[115] Simply forming a council, though, does not guarantee success.

Effective P–16 councils typically have permanent staff, rotate leadership, and set research-based goals that neither K–12 nor higher education can achieve alone. Specifically, they can address college- and career-ready concerns by helping align high school standards, curricula, and assessments with college entrance and placement requirements as well as reform teacher education programs.

Councils often suffer from turf wars, unstable funding, or a turnover in executive leadership.[116] Consequently, even states with an established council must periodically clarify its mission. **Georgia** formed one of the nation's first P–16 councils, with influence extending across several gubernatorial terms. Recently, though, Georgia Governor Sonny Perdue charged each education sector with sharing responsibility to improve high school graduation rates, postsecondary enrollment, teacher quality, career-readiness, P–16 data systems, and SAT and ACT scores. From this effort, the state has launched a new data warehouse that offers concise and transparent public data on the performance of the state's K–12 schools, technical colleges, and colleges and universities.

Bridge K–12 and Postsecondary Expectation Gaps

Once states have established an effective P–16 council, officials from K–12 and postsecondary education can jointly develop high school standards and assessments. Today, state efforts to align high school assessments with postsecondary expectations are still nascent. Just nine states have aligned expectations between the sectors, but 23 more states have pledged to do so in the near future.[117] **California** and **New York** offer promising examples of how to measure college- and career-readiness using state-developed high school assessments.

Postsecondary institutions in **New York** now find high school end-of-course exams sufficiently challenging to place incoming students in credit-bearing courses.[118] Likewise, high school students seeking entrance to the University of California system must first complete a college-preparatory course sequence. In 11th grade, they are then asked to take a college-readiness assessment created jointly by **California**'s postsecondary and K–12 systems and used as the California State University entrance standard. Those 11th-grade students deemed unprepared for college by the Early Assessment

Program are offered online courses in English reading, writing, mathematics, and critical thinking and can then retake the exam.

Coupling postsecondary entrance requirements with strong incentives can encourage more students to take a college- and career-ready curriculum. For example, K–12 and postsecondary systems can create and fund scholarship opportunities based on rigorous coursetaking and performance on a college-readiness assessment. For low-income students in 8th, 9th, and 10th grades who take a college-preparatory curriculum, **Oklahoma**'s Promise scholarship will cover the costs of college.

Michigan encourages high school students to succeed on its ACT-based Michigan Merit Exam by offering high-performing students a $4,000 scholarship at in-state postsecondary institutions. Similarly, **Wyoming**'s Hathaway Scholarship gives high school students who take the most rigorous courses as much as $3,200 per year in college tuition, while two additional tiers offer rewards for progressively less-rigorous coursetaking.

Progress to Date in Improving Education Governance

State leaders face unparalleled pressure to increase student achievement. They also possess greater authority than ever before to enact substantive policies. Although governance reforms alone do not improve college- and career-readiness rates, they create and sustain important policy initiatives that can do so. For example, **Maine** recently consolidated several hundred school districts, expected to generate cost savings sufficient to increase teacher pay and guarantee a full-time principal in every high school. **Massachusetts** and **Ohio** recently centralized and streamlined authority for student learning within a single cabinet-level office of the secretary for education.

For states constrained by historical governing arrangements that leave key education decisions to individual school districts, implementing a statewide high school redesign agenda is even more challenging. Coursetaking rigor can vary across school districts, limiting the access of minority and low-income students to college-ready courses.[119] Taking into account its local control environment, **Massachusetts** has targeted parents and local education leaders through an aggressive communications campaign that emphasizes the importance of taking MassCore—the state's recommended high school curricula. State policymakers hope this rigorous curriculum will increasingly be offered to all students as a result of increased parental demand. State education leaders are also considering financial incentives, including scholarships for students who complete the MassCore curriculum.

7. Reiterate the Call to Action

In 2005, the National Governors Association and Achieve, Inc. released the first *Action Agenda for Improving America's High Schools* that called for state action to improve college- and career-ready graduation rates. This publication highlights state progress since 2005. It captures the hard work that many states have undertaken to make high school graduation requirements more rigorous while expanding access to college-level courses. At the same time, it outlines several remaining challenges, such as recasting academic standards to be fewer in number, clearer in focus, and higher in rigor; developing quality teachers and principals who can help students meet the higher expectations; and strengthening the academic underpinnings of career technical education.

The evolution of the high school redesign landscape can be seen throughout this updated *Action Agenda*. New trends are emerging, such as a greater appreciation for international benchmarking and an increased focus on STEM education. States, too, continue to recognize the need for real-time performance data, and this hunger for information is manifested in their sizable data infrastructure investments.

Despite state action toward achieving this agenda, two indicators signify cause for concern. First, high school graduation rates remain stagnant. Second, the high percentages of students needing postsecondary remediation persist. Although the nation is moving in the right direction, the work to improve America's high schools is far from done. That is why the four national organizations representing the major education stakeholders in each state have joined forces to reiterate the *Action Agenda* and the call for action. Each is committed to bring greater consensus and urgency to this work.

The final words of the first *Action Agenda* continue to ring true. "We must not let the difficulty of the task sway us from taking the right course. We owe it to our youth and our nation to redesign the American high school and make it a cutting-edge institution once again. The future health of our economy and democracy depends on our answering this call to action."[120]

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