

## Moving Beyond AYP: High School Performance Indicators

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### Executive Summary

It seems that the nation has recognized the fact that its public high schools are not adequately preparing students, particularly poor and minority students, for college, careers, and life in the twenty-first-century global economy. National leaders and the education policy community have embraced the idea that the education system must establish “college and career readiness” as the goal for all students. There also has been widespread acknowledgement that addressing the problems in low-performing high schools is necessary if that goal is to be met. As educators, leaders, and policymakers seek systemic solutions to stem the dropout crisis and prepare all students for college and careers, there is increasing recognition that more and better data is critical to both identifying the problems and addressing them.

Through Title I of the Elementary and Secondary Education Act (ESEA), federal policy currently uses Adequate Yearly Progress to establish goals, measure school performance, guide intervention decisions, and measure progress. Unfortunately, AYP has been fundamentally flawed at the high school level because of weak and inconsistent definitions of proficiency and graduation rates that are not aligned to the goal of every student graduating ready for college and a career. Improving these “bottom line” indicators—through the establishment of common graduation rate calculations and common college- and career-ready standards and assessments—is a critical step in helping policymakers and education leaders hold the system accountable for the outcomes of every student and identify low-performing high schools. However, even flawless indicators of graduation and college and career readiness are not sharp enough to discern the factors that contribute to schools’ low performance, to guide the development of improvement strategies, or to measure interim progress along the way to success.

As education stakeholders look ahead to ESEA reauthorization, there is near-universal consensus that the current federal accountability and school improvement systems need to be reinvented, infused with more and better data, and tailored to meet the individual needs of schools and students. In many ways, the current law whet the nation’s appetite for education data by requiring the reporting of annual test information, and doing so at the subgroup level. Now, educators, policymakers, and the public are eager for indicators that both better reflect the national goal of graduating all students ready for college and careers and help educators plan and implement strategies for getting them there.

Fortunately, a number of high school performance indicators have emerged as being predictive of high school graduation and college and career readiness. Those factors include attendance, course success, on-track-to-graduation status, course-taking patterns, success on college- and career-ready assessments, postse-

condary success rates, and school climate. This brief describes the research behind those indicators, measurement options and challenges, and current use across the nation.

Given the demand for data-driven, innovative, systemic reform that leads to college and career readiness for all students, federal policymakers should embrace the opportunity to leverage the use of multiple, actionable high school performance indicators. Specifically, federal policymakers should

- establish graduation and college and career readiness as the goal for all students and high schools;
- improve national indicators for measuring college- and career-ready graduation;
- reinvent accountability and school improvement to include multiple high school performance indicators;
- invest in state and local systems to collect, analyze, and communicate data, including high school performance indicators;
- build the capacity of educators and education leaders to use high school performance indicators; and
- invest in research activities to inform the use of various high school performance indicators.

## **Rethinking the Federal Approach to High School Performance Indicators**

### **Flaws in current indicators and their use**

The most recent ESEA reauthorization, known as the No Child Left Behind Act (NCLB), articulated the goal of ensuring that all students be proficient in reading and math by 2014 and required each state to set annual progress targets—termed Adequate Yearly Progress (AYP)—toward that goal. Every public school is evaluated annually to see if it has met AYP; for high schools, AYP is generally defined as moderate improvements in test scores (overall and for each student subgroup), and a minimal increase in overall graduation rates. Schools that receive federal funding through the federal Title I program and do not meet AYP for two years in a row are subject to a series of federally mandated interventions.

Although AYP is intended to serve as an actionable measure of how well schools are educating their students, it is not an effective tool for doing so at the high school level. High school proficiency is gauged by performance on state tests aligned to state standards that often measure basic skills, not students' preparation for college and the workforce, and the standards vary significantly across states. The rules for determining AYP to date have not included a consistent method for calculating graduation rates, considerations for the graduation rates of student subgroups, or requirements to increase graduation rates meaningfully over time. These flaws undermine AYP as an effective tool for measuring high school performance and helping to identify high schools that need improvement and support.

In an ideal world, a high school diploma—from any high school in the nation—would be a valid and reliable certification that a student was ready for college, work, and life in the twenty-first-century global economy. Even then, an AYP measure based on high school graduation rates would serve as too blunt an instrument for determining the interventions that will lead to school improvement, *because low test scores or poor graduation rates are symptoms of poor high*

#### **Efforts to Improve Current Measures**

Indicators of college- and career-ready graduation are critical to making every student's outcomes visible and holding schools accountable for those outcomes. There is promising action by national leaders to improve these indicators.

**College and career readiness:** State leaders recently launched a collaborative effort to develop a common set of standards and assessments that will be aligned to college and career readiness. However, it may be several years before this work results in widespread usage of these assessments for accountability and school improvement purposes.

**Graduation rates:** The U.S. Department of Education (ED) recently released new regulations that require a commonly defined graduation rate and will change the role that graduation rates play in AYP determinations. However, it remains to be seen how these regulations will be implemented by the new administration and the states. For more information, see *Every Student Counts: The Role of Federal Policy in Improving Graduation Rate Accountability*.



*school performance, not the problem itself.* Yet regardless of a low-performing school’s cause of failure, the depth or breadth of challenges in the school, or the solutions that might work, all schools currently implement the same consequences in the same sequence based solely on how many years they have failed to make AYP.

### **A new approach to indicators as part of accountability and school improvement**

In rethinking the federal approach to high school accountability and school improvement, the Alliance for Excellent Education has embraced a strategy that would recognize the value of one bright-line indicator of school performance—AYP, with improved indicators of graduation and college and career readiness—but also recognize the indicator’s limitations in conveying a fuller picture of the progress and challenges that students within a school are making. That fuller picture of student and school performance—one that takes more advantage of the myriad data available—is what should be used to more clearly describe the challenges schools face, drive school improvement efforts, and recognize progress toward established goals. This three-part approach would work by:

- **Establishing a college- and career-ready “check engine light”:** It is useful to have a common indicator of high school performance that could serve as a kind of check engine light to indicate whether high schools are meeting their ultimate goal of graduating every student prepared for college, careers, and life in the twenty-first century. For AYP or its successor to truly serve this purpose, it would need to be based on meaningful, common measures of graduation and college and career readiness. This requires commonly calculated, accurate graduation rates and high-quality assessments, based on common standards that measure college and career readiness. It also requires provisions that hold schools accountable for the outcomes of every student.
- **Using multiple indicators to support diagnostic and school improvement purposes:** Additional data about school performance can help guide decisionmaking about school improvement that will help schools progress toward improved rates of graduation and college and career readiness. To put this into operation, states would collaborate with district leaders to define a set of high school performance indicators with corresponding annual progress goals.

Districts would work with school leaders to use this information to differentiate among low-performing high schools and to guide educators and education leaders in designing and implementing strategies to address low-performing schools, including closing and replacing schools.

- **Using annual progress goals on multiple indicators to drive reform:** Measuring annual improvements on both the ultimate indicators of graduation and college and career readiness and the other high school performance indicators would better illustrate high schools’ progress, trigger incentives or improvement actions, and inform decisionmaking. As part of the accountability and school improvement system, schools would be analyzed to see if they made progress goals on AYP and school performance indicators. A school would continue to be considered low performing if had not met its ultimate goals as measured through AYP. However, by making progress on the other school performance indicators, a school would demonstrate that its current improvement strategies were positively influencing progress in the school, and were more than likely to lead to improved test scores and graduation rates. These signs of success would motivate school staff and students to continue their hard work, and guard schools from being subjected to a new improvement plan.



This approach of embedding additional high school performance indicators into the high school ac-  
tivity and school improvement system serves a range of positive purposes. First, data can be powerful, serving  
as both a flashlight and a motivator. Identifying certain indicators as important enough to be defined,  
measured, and reported publicly raises their visibility  
and focuses attention on improving them. If the  
high school performance indicators correlate to  
improved rates of graduation and college and  
career readiness—as they should—federal policy of-  
fers a powerful lever to focus on them.

Second—as is the case in most other industries and  
sectors, including medicine, business, and econom-  
ics—using multiple indicators paints a fuller pic-  
ture and can therefore drive more informed deci-  
sionmaking from the classroom to state capitols to  
Congress. It is important to note that there is no  
single “right” mix of performance indicators, and  
no performance indicator is perfect. As noted by  
Education Sector’s Kevin Carey, there is a “need  
to use multiple measures when evaluating schools,  
so the flaws of a single measure don’t skew the  
overall picture of school performance.”<sup>1</sup>

Lastly, improvement on high school performance  
indicators is measurable progress that should be  
celebrated. While test scores and graduation rates  
may take longer to improve, effective school  
improvement efforts should lead to fairly immediate  
increases in some of the high school performance  
indicators that are linked to graduation and college  
and career readiness. One of the lessons learned  
from school reform is that “demonstrating quick  
wins”<sup>2</sup> is critical to long-term success. Progress on  
school performance indicators can serve internally  
as motivation to school staff and students to con-  
tinue hard work, and externally as a signal to lead-  
ers, the community, and policymakers that current  
efforts are working.

### The “Multiple Measures” Debate

Over the last few years, as policymakers, education leaders, and advocates  
have developed recommendations on how to improve the accountability and  
school improvement process through the use of additional indicators, two  
general theories have emerged. To generalize, on one hand there was an  
interest in preserving the prominent role that test scores play in the system,  
particularly in holding schools accountable for the education of poor and  
minority students. There was a belief that getting all students to proficiency  
in reading and math was the ultimate goal, and that state tests were the  
most reliable current measures and were least subject to weak and inconsis-  
tent policies, such as graduation requirements, course quality, and grading  
policies. This approach emphasizes the role of those bottom-line indicators  
in accountability.

On the other hand, there was an interest in altering AYP to include multiple  
measures of student performance, school performance, or school progress.  
(These terms are clarified below.) There was a belief that tests, particularly  
the tests that are promulgated by NCLB, are not the best measurements of  
student and school performance, and that the focus on such tests has re-  
sulted in a number of unintended consequences—such as a narrowing of the  
curriculum or the pushing out of low-performing students—that are harmful to  
students, particularly poor, minority, and low-performing students. This ap-  
proach emphasizes the role of this data in guiding school improvement ef-  
forts. As part of these discussions, the phrase “multiple measures” is often  
used interchangeably to describe very different ideas. A set of terms is of-  
fered below to distinguish between them.

- *Multiple measures of student performance:* To measure students’ mastery  
of skills and content, NCLB currently relies on state-administered, large-  
scale summative assessments that traditionally rely on multiple-choice  
item types. Multiple measures of student performance refers to the use of  
alternative methods to measure student performance and mastery of skills  
and content, such as writing samples, research projects, investigations,  
portfolios, and performance-based assessments.
- *Multiple measures (or indicators) of school performance:* To evaluate high  
schools’ performance, NCLB relies on Adequate Yearly Progress (AYP), a  
measure based on graduation rates and the percent of students scoring  
proficient in mathematics and reading. Multiple measures of school per-  
formance refers to the use of additional indicators (e.g., course comple-  
tion rates, attendance rates, credit accumulation rates) to evaluate school  
performance. This brief is focused on the issue of multiple indicators of  
school performance.
- *Multiple measures of school progress:* To evaluate high schools’ progress  
in improving their performance, NCLB initially required all states to use a  
“status” accountability model. Using “100 percent of students proficient in  
2014” as the end goal, states were required to set statewide annual  
benchmarks toward that goal (such as 72 percent proficient in 2009, 76  
percent proficient in 2010, and so on). Schools are evaluated to see if  
they have met that annual benchmark, regardless of their previous year’s  
performance. Multiple measures of school progress refers to the various  
ways that progress can be measured, such as through “growth” or “value-  
added” models that ascertain the progress a school makes from year to  
year. ED has recently approved a few states to pilot such accountability  
models, but the vast majority of states are not involved, and no state is  
currently using an alternative progress model at the high school level.



## High School Performance Indicators Should Not Be Based on Student Population or Resources

Many indicators can and should be used by professionals at all levels in the education system for decisionmaking. However, not all indicators are appropriate for measuring high school performance, including those indicators that measure the socioeconomic makeup of a school or its available resources. Such indicators have too often been used as excuses for establishing low expectations for student and educators or accepting chronic low performance—excuses that need to be abandoned.

**Socioeconomic indicators:** Indicators that describe the socioeconomic makeup of a school should not be used to measure high school performance. There are a number of reasons for this. First, schools cannot change these factors. Second, the goal of public schools is to be successful with all students regardless of, or even in spite of, such characteristics. Third, research and best practice demonstrate that well-designed schools with effective educators can successfully educate even high-challenge student populations. Fourth, research indicates that academic factors are far more predictive of students' success. Lastly, despite decades of reliance on such socioeconomic indicators to set expectations, target resources, and make decisions, poor and minority students, particularly at the high school level, continue to receive an inferior education and suffer the most from the dropout crisis.

This should not be misinterpreted to undermine the importance of reporting all school performance indicators at the subgroup level. One of the most positive consequences of the current ESEA is the required reporting of test score data at the student subgroup level. This data has highlighted the inequities that penetrate our schools and revealed that some schools that perform well or fine on average are not succeeding with poor and minority students. Revealing, understanding, and acting upon these gaps is useful and powerful for multiple accountability and school improvement purposes. As noted in the text below, all performance indicators should be reported at the subgroup level. This is also not to be misunderstood as a statement against using student population information to contextualize performance information. Many states and districts take socioeconomic, disability, or ELL status data into account when they weigh indicators in a multiple-indicators accountability system. These issues are discussed more on page 15.

**Resource equity indicators:** Similarly, indicators that describe resources available in a school should not be used to measure high school performance. There is no question that low-performing high schools are often characterized by fewer resources, that resource allocation data should be made public, and that state and local policies must be changed to address these inequities. In fact, many advocates have called for federal policies that would hold states and districts accountable for the equitable distribution of resources that provide students with the opportunity to learn. However, for the most part, educators in a school building do not have control over these issues, and the reality is that the nation demands that all schools be successful with what they have—which includes the students they enroll, the educators they are assigned, and the resources they are provided.

## High School Performance Indicators

The approach described in the previous pages should rely only on high school performance indicators that emerge from an evidence base linking them to the outcomes the nation cares about most: graduation from high school, and college and career readiness. These indicators should be measured in a way that is valid and reliable and, if possible, consistent across districts and states. In addition, they should be actionable at the school level, meaning that school leaders, teachers, and staff can use them to make changes that will have a demonstrable impact on student outcomes. The policies that leverage the use of these indicators should ensure three things: that school performance indicators are defined clearly and transparently; that they are reported publicly in ways that are easy for the public—including parents, policymakers, and researchers—to access, understand, and use; and that they are disaggregated by student subgroup.

Fortunately, a number of high school performance indicators have surfaced as being predictive of high school graduation and college and career readiness. They include attendance, course success, on-track-to-graduation status, course-taking patterns, success on college- and career-ready assessments, postsecondary success rates, and school climate.

The following pages describe the research behind those indicators, as well as their measurement options and challenges, and current efforts by states and districts to use them. As noted previously, all indicators have strengths and weaknesses that should be taken into consideration when policymakers and education leaders decide to use them.

### **INDICATORS: On Track to High School Graduation Status**

Research demonstrates that several academic factors—such as attendance, course success, and credit accumulation—are good predictors of eventual high school graduation. By measuring and keeping track of this information, educators can intervene with students who are struggling and prevent students from falling off

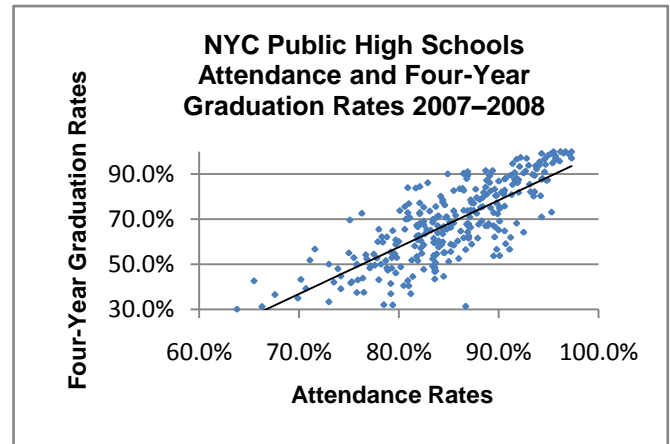


track to graduation. When amassed at the school level, this information can be used to understand the nature of academic problems in low-graduation high schools, unearth systemic weaknesses, and guide education leaders' efforts to address them head on.

### Attendance

Excused or not, absence from school or classes hampers a student's opportunity to learn. Not surprisingly, absenteeism, cutting classes, and truancy all have been found to be highly correlated with dropping out.<sup>3</sup> In fact, findings from a national longitudinal survey demonstrated that students who had high absenteeism, cut classes at least once a week, *or* were tardy ten or more times in a single month were more than six times as likely as their peers to drop out.<sup>4</sup> Recent research in Chicago found that nearly 90 percent of freshmen who missed less than a week of school per semester graduated, regardless of their academic history.<sup>5</sup> Similarly, Los Angeles students who were absent for more than ten days in a single school year were half as likely as their peers to graduate.<sup>6</sup> In addition, dropouts themselves acknowledge the importance of attendance: in a recent survey of those who chose to leave school without attaining a diploma, missing too many days of school and having trouble catching up was the second most reported reason for dropping out.<sup>7</sup>

At the school level, widespread attendance problems contribute to low performance and graduation rates. An analysis of national data found that schools with higher attendance rates had lower dropout rates.<sup>8</sup> This relationship is illustrated in the diagram to the right, which charts the attendance rates and four-year graduation rates for New York City's high schools.<sup>9</sup> Attendance data can be used at the school level to guide both preventive and responsive strategies to low attendance at the student and school levels. One study that surveyed strategies for increasing attendance described them as falling into four overlapping categories: sound and reasonable attendance policies with consequences for missing school; early interventions; targeted interventions for students with chronic attendance problems; and strategies to increase engagement and personalization with students and families that can affect attendance rates.<sup>10</sup>



Source: Analysis of 2007-08 Progress Report Results for High Schools.

Note: The attendance rate is calculated by taking the total number of days attended by all students and dividing it by the total number of days on the school's register for all students. The four-year graduation rate is defined as the percent of the cohort that graduated with a Regents or local diploma within four years.

Education officials have a long history of collecting some form of attendance data for operational and fiscal management purposes.<sup>11</sup> Forty states now collect student-level attendance data through their statewide data systems, though the frequency of collection varies significantly, from daily to once annually.<sup>12</sup> There are well-documented challenges to ensuring the quality of attendance data, including inconsistent coding policies, implementation of policies by staff entering data, and technology capabilities. However, ED's National Forum on Education Statistics has recently published a best-practice guide on this issue, with the goal of improving the standardization of student attendance data collection.<sup>13</sup>

Attendance data can be used to produce a variety of indicators that have value for different purposes. Enrollment or "membership" indicators help education officials understand how many students schools are serving for operational, fiscal, and other reasons. Truancy indicators quantify unexcused absences based on local definitions of those absences, often focus on chronic or habitual behavior, and are calculated differently across districts and states.<sup>14</sup> As part of the Safe and Drug-Free School program, NCLB actually requires state



education agencies to report truancy rates for every school, though these rates are not currently shared publicly.

Attendance indicators quantify absences. There are a number of attendance indicators that can be aggregated to the school level for school improvement purposes, including the average daily attendance or the percent of students missing a certain number of days of school. Many states and districts report school-level attendance rates and incorporate them into their accountability and school improvement systems.

### *Course success<sup>a</sup>*

In most cases, high graduation requirements are based on a series of course requirements. Success in these courses is usually articulated through grades and passing the course, which eventually translates into a student's grade point average (GPA) and credit accumulation, all of which correlate with graduation.

- **Grades:** As part of the Consortium on Chicago School Research's (CCSR) extensive research on Chicago Public Schools' student outcomes, grades and course success were found to be the best single predictor of graduation, test score improvement, and college graduation.<sup>15</sup> In fact, once students' freshman-year grades are known, other background information, including test scores, does not improve the predictability of graduation. Freshman with less than a C average were more likely to drop out than to graduate.<sup>16</sup>
- **Course failures:** Another way to look at course success is by the number of course failures. The CCSR research found that once students had failed six semester courses (that is, three full-year courses), they were so unlikely to graduate that additional failures only modestly decreased the probability of graduating. Moreover, it was found that few students struggle in a single course and perform well in the rest; rather, failure in even one semester course is generally a sign of overall trouble.<sup>17</sup> Similarly, in Los Angeles, less than 65 percent of students who failed a single high school course eventually graduated; only 35 percent of students who did not pass algebra 1 by the end of their freshman year of high school eventually graduated. Schoolwide data on course failures demonstrated that the most troubled schools had even higher rates of failure.<sup>18</sup>
- **Credit accumulation:** As students fall further behind in course completion, they lack the number of credits to be promoted to the next grade, are required to repeat classes and grades, and become older than their classroom peers, all of which makes them more likely to drop out. National data corroborates that credit accumulation is a strong predictor of graduation. Within each academic year, eventual dropouts earned fewer credits than eventual graduates, particularly in English, mathematics, and science courses. Credit accumulation is a particular problem for black and Hispanic dropouts, who were further behind their graduating peers than were white dropouts.<sup>19</sup> The impact of falling behind on credits is particularly pronounced in New York City, where 93 percent of eventual dropouts were over-age and undercredited, meaning they were at least two years behind the level of credit accumulation expected for their age.<sup>20</sup>

States are increasingly collecting the course data necessary to calculate these indicators at the student level, including enrollment by course (twenty-seven states), completion status (i.e., pass or fail) (fifteen states), and grade received (sixteen states). In addition, a handful of states and districts incorporate this information into accountability and improvement systems.

### *Promotion rates*

Typically, students must earn a sufficient number of credits toward graduation in order to be promoted from one grade to another, such as from ninth to tenth grade. The rate of promotion in a school describes how well schools are succeeding in moving students toward graduation. Research shows that most students fall off

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<sup>a</sup> The challenges inherent in course-based indicators are described on page 12.



track in ninth grade, and it is hard for them to recover once they do. Therefore, promotion rates also indicate how well a school is succeeding with students in the critical ninth-grade year.

In recent years, researchers from Johns Hopkins University used data from federal databases to calculate the “promoting power” of high schools by comparing the number of seniors in school to the number of freshmen three years earlier. High schools with low promoting power have many more freshmen than seniors—meaning that a large number of students are not accumulating credits, not being promoted to the next grade, and, ultimately, are dropping out. Using this data, the researchers established that high schools with a promoting power of less than 60 percent—meaning there are consistently 60 percent fewer seniors than freshman—are schools in which graduation is not the norm; they have labeled these schools “dropout factories.”<sup>21</sup> According to their analyses, the roughly two thousand schools that fit this description represent little more than 10 percent of the nation’s high schools but produce half the nation’s dropouts.<sup>22</sup>

### ***Composite indicators of “on track to graduation”***

When analyzed in combination, these various academic characteristics can provide even stronger indications of which students are at risk of becoming dropouts.

- Three out of four students who ultimately dropped out of Philadelphia schools had either a failing grade in math or English or attendance rates below 80 percent in the eighth grade.<sup>23</sup>
- Seventy-five percent of the dropouts from the Boston Public Schools’ Class of 2004 fit into one of four distinct categories: 1) students with multiple ninth-grade course failures; 2) students with one or more eighth-grade risk factors (attendance below 80 percent, two or more years over age, or failure in multiple core courses); 3) late-entrance English language learners; or 4) special education students taught in “substantially separate” classrooms.<sup>24</sup>
- Chicago Public Schools’ eventual graduates and dropouts were accurately identified 80 percent of the time using an “on-track” indicator based on the number of credits earned and the number of failures in core courses by the end of the ninth grade.<sup>25</sup> On-track students are four times as likely to graduate in four years as students who have fallen “off track.” Moreover, a school’s rate of on-track students is not simply a reflection of the incoming student population: research shows the rate of on-track students is more likely to be more positively influenced by reforms at the high school than by changes in the preparedness of incoming students.<sup>26</sup>

There is growing recognition by education leaders and policymakers that these indicators are valuable for multiple purposes. As described in *Using Early-Warning Data to Improve Graduation Rates: Closing Cracks in the Education System*,<sup>27</sup> a number of states, cities, and districts across the country are using these indicators to develop data-based, early-warning indicator and response systems. As education and policy leaders have taken responsibility for addressing the dropout crisis in their communities, they have turned to these indicators as tools for identifying and addressing the academic factors contributing to the problem.

### **INDICATORS: College and Career Readiness**

As the nation embraces the new goal of college and career readiness for all students, there is increasing interest in measuring students’ postsecondary readiness before they leave the public school system. Doing so provides powerful information to stakeholders at all levels of the system. For example, states and districts can help establish college and career readiness as the goal for all educators and students, improve policies, and better align K–12 and postsecondary expectations. At the school level, postsecondary readiness measures can help paint a picture of how well a school is preparing its students for the academic demands of postsecondary





education. Educators and leaders can use this information to inform schoolwide practices, by addressing course-taking patterns, improving instruction (such as through curricular mapping or professional development), or identifying which students are prepared and which might need additional support. At the student level, postsecondary-readiness measures can help students and their parents understand whether they are on track to meet their goals

Many researchers and advocates generally define college readiness as “the level of preparation a student needs in order to enroll and succeed—without remediation—in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program.”<sup>31</sup> Work- or career-readiness definitions tend to include both the qualities and habits that characterize effective employees as well as general and basic academic skills.<sup>32</sup> In the last few years, the documented convergence between the expectations of employers and colleges<sup>33</sup> has led to the merging of these concepts and efforts to develop tools that measure both.

The EPE Research Center identified four major approaches used by states to define college or work readiness: courses, skills, standards, and tests. As of 2009, thirty states had completed definitions of either college or career readiness: twenty had defined college readiness, most commonly through a combination of courses and standards, and twenty-eight had defined work readiness, most commonly through standards.<sup>34</sup>

### *Career- and postsecondary-readiness tests*

Postsecondary education institutions have long used assessments as tools for measuring prospective students’ college readiness, including national admission tests like the ACT and the SAT and student scores on exams tied to college-level coursework such as the Advanced Placement (AP) or International Baccalaureate exams.

Research demonstrates a strong correlation between performance on these assessments and success in college. For example, ACT has established College Readiness Benchmarks—the minimum ACT test scores required for typical students at typical colleges to have a high probability of success in credit-bearing courses: English composition, social sciences courses, college algebra, or biology. Using data from ninety-eight institutions and ninety thousand students, ACT found that students who meet these benchmarks have a roughly 50 percent chance of earning a B or better and approximately a 75 percent chance or better of earning a C or better in the corresponding college courses.<sup>35</sup> ACT has established related benchmarks for the EXPLORE exam (eighth or ninth grade) and the PLAN assessment (tenth grade); using this data, students, parents, and educators can evaluate and improve students’ college readiness throughout their secondary career. Similarly, AP exams are considered a valid measure of students’ content mastery of college-level studies in specific academic disciplines. Research consistently shows that success on AP exams—defined as a score of 3 out of 5 or higher—is predictive of college success and college graduation. For example, low-income students who

#### **Too Many Students Are Not College Ready**

As more students participate in college-ready assessment programs, there is more information about the college readiness of all students, not just college-bound students. Unfortunately, the data demonstrates that too many high school students are not college ready.

**AP:** For example, from 2003 to 2008, the percent of high school graduates who took at least one AP exam during their high school career increased by 6 percentage points. During the same period, the percent of high school graduates who scored a 3 or higher on an AP exam at some point during high school increased 3 percentage points. However, only 60.9 percent of the students who took an AP exam scored a 3 or higher—a decrease of 4 percentage points. This means that two out of five students who took an AP exam did not reach college-ready levels.<sup>28</sup>

**ACT:** These gaps are confirmed by ACT results: of the 1.2 million students who took the ACT, only 53 percent had college-ready reading skills, 43 percent met the benchmark in math, 28 percent met the benchmark in biology, and 68 met the benchmark in English composition. Only 22 percent of test takers were college ready in all four areas. This is consistent with the data from the four states where more than 90 percent of graduates were tested in 2008; in Colorado, Michigan, Illinois, and Mississippi, the percent of test takers that were college ready in all four areas hovered around 20 percent.<sup>29</sup>

**Algebra II:** As described in the text, passing algebra II has been found to correlate highly with college success. In 2008, ninety thousand students took the ADP algebra II end-of-course exam, and the average score was a mere 27 percent, with average scores ranging from 21 percent to 35 percent across the twelve states.<sup>30</sup>



passed at least one AP exam had a college graduation rate of 39 percentage points higher than low-income students who did not take any AP course or exam (46 percent versus 7 percent).<sup>36</sup> As a result, more than 90 percent of four-year colleges and universities in the United States grant students credit, placement, or both based on successful AP exam scores.<sup>37</sup>

States are taking steps to measure the college readiness of all students—not just college-bound students—by embedding college-ready assessments in their statewide systems. One approach, used by four states (Georgia, New York, Texas, and California), is to anchor state-developed high school assessments to college expectations. In these states, reaching a certain score on the state assessment signals college readiness that will be used by the state’s postsecondary system for placement decisions. Alternatively, six states require all students to take the ACT (Colorado, Illinois, Kentucky, Michigan, and Tennessee) or the SAT (Maine) as part of their state assessment system. An additional twenty-three states are developing or plan to develop assessments to measure students’ postsecondary readiness.<sup>38</sup>

States are also increasing their capacity to collect and report information about students’ performance on college-ready assessments. Twenty-nine states report that they collect, through their statewide longitudinal data system, individual students’ SAT scores (fourteen states), ACT scores (twenty-one states), or AP exam scores (fifteen states), and an additional fourteen states have existing plans to do so.<sup>39</sup> Fewer states publicly report this information at the school level (six currently, eight planning) or incorporate it into accountability systems through performance goals, incentives, or accountability formulas.<sup>40</sup>

Such college- and career-ready assessment data could certainly be translated into school-level indicators, such as the percent of students reaching a career- and postsecondary-ready threshold on such assessments.

### ***Career- and postsecondary-ready coursework***

Research shows that high school coursework is a significant predictor of high school graduation and the greatest predictor of success in college, with a particularly strong influence on the likely achievement of poor and minority students.<sup>41</sup> Data also consistently shows that students benefit from participating in more rigorous courses regardless of their achievement in those courses.<sup>42</sup> As demonstrated by the statistics below, these benefits are true of both students who participate in a full college- and career-prep course of study and students who participate in critical gateway courses—algebra II, for example—that have a particularly strong correlation with success in high school and beyond.

- Massachusetts students who participated in higher-level math courses have been shown to outperform their peers on all sections of their state’s achievement test, not just in math.<sup>43</sup>
- Los Angeles students who passed algebra I by their high school freshman year were far more likely to graduate from high school than their peers who did not (70 percent to 35 percent).<sup>44</sup>
- Among 2008 ACT test takers, students who had completed their college-prep course sequence were more likely than their peers who did not complete the core to meet the College Readiness Benchmark in math (50 percent compared to 29 percent) and twice as likely to meet all four College Readiness Benchmarks (27 percent to 14 percent).
- Students who take four years of college-prep English and three years each of college-prep mathematics, science, and social studies are less likely to need remedial courses than students who do not take such a rigorous curriculum.<sup>45</sup>



- Students who complete algebra II are twice as likely to earn a bachelor’s degree than students who do not, and taking challenging math courses through at least algebra II reduces the gap in college-completion rates between African American and Latino students and their white peers by half.<sup>46</sup>
- Students who earn a 3 or better on one or more Advanced Placement exams in the core content areas are more likely to graduate from college in five years or fewer compared to non-AP students, even after controlling for prior academic achievement and other demographics.<sup>47</sup>
- Noncollege students who took algebra II or higher are far more likely to say they are prepared for the math they will face at work (68 percent).<sup>48</sup>

For many students— particularly low-income and minority students—a rigorous college-prep curriculum is not even an option. According to the most recent national grade-cohort longitudinal study conducted by ED’s National Center for Education Statistics, while 59 percent of white and 72 percent of highest-income twelfth graders attended high schools that offered calculus, less than half of African American, Hispanic, and lowest-income students do.<sup>55</sup> This inequitable distribution of rigorous coursework prematurely shuts the college access door on far too many students. As articulated by the author of that federal analysis, researcher Cliff Adelman, “The task of providing quality secondary school curricula to *everybody* ... the *paths* to the kind of learning challenges students will face in higher education, is enormous. If the promise of No Child Left Behind is to be realized at the secondary school level, it is first and foremost through the equitable provision of opportunity-to-learn.”<sup>56</sup>

Despite the clear correlations between participation in rigorous courses and high school and postsecondary success, too few high school students are taking such courses. (See box below.) Lackluster participation in advanced coursework is due to a number of reasons. For decades, the traditional American high school has tracked students into “college prep” and “general education” pathways. Historically, students left out of the college-prep track did not have access to advanced or college-level coursework, and even if they did, most were not encouraged or motivated to participate and succeed in these courses. Nationally, there are significant gaps in advanced course taking among student subgroups. Only 42 percent of black students, 34 percent of Hispanic students, and 33 percent of the lowest-income students take an advanced mathematics course, compared to 54 percent of white students, 69 percent of Asian students, and 72 percent of the highest-income students.<sup>57</sup>

Increasing acknowledgment of the importance of a rigorous college-prep curriculum has led to multiple efforts by various stakeholders to define a college-prep curriculum and increase students’ access to it. To comply with the new federal Academic Competitiveness Grants program, which provides need-based financial aid to undergraduates who completed a rigorous high school curriculum, every state has established an ED-approved rigorous secondary school program of study. While there is no data available on how many students have access to and complete

### Many Students Are Not Completing Coursework That Leads to College and Career Success

Data from various federal and national sources and local studies demonstrate that too many students are not completing a postsecondary-ready curriculum or gateway college-prep courses.

- In 2008, 30 percent of the 1.4 million students who took the ACT did not complete the recommended college- and career-prep course,<sup>49</sup> even though in many states, ACT test takers are self-selected, doing so to apply to college.
- In 2005, more than 30 percent of graduates completed less than a standard curriculum (four credits of English and three credits each of social studies, mathematics, and science), and only 10 percent completed a rigorous curriculum (four credits of English and mathematics, including pre-calculus, and three credits each of social studies, foreign language, and science, including biology, chemistry, and physics).<sup>50</sup>
- Only 25 percent of ninth graders in Los Angeles graduated with the completion of California’s A-G college curriculum, the sequence of courses articulated by the University of California as minimum eligibility requirements for admission.<sup>51</sup>
- Nearly 45 percent of students who intend to go to college after high school have not taken the college-prep courses that will allow them to proceed to credit-bearing courses.<sup>52</sup>
- Only 50 percent of high school graduates complete an advanced math course, beyond algebra II.<sup>53</sup>
- In 2008, only 25 percent of U.S. high school students took an AP exam, with only 15.2 percent demonstrating mastery on at least one exam.<sup>54</sup>



these programs of study, a recent study from the Government Accountability Office found that limited student access to the approved rigorous curricula and difficulty verifying students' completion of this curricula presented challenges in implementing the program.<sup>58</sup> Additionally, the number of states requiring all students to complete a college- and career-ready curriculum<sup>b</sup> has increased, from two states in 2005 to twenty states in 2009; another eight states report plans to do so.<sup>59</sup> In fourteen of these states, parents can sign a waiver allowing their children to opt out of the requirements.

States are also increasing their capacity to collect and report information about students' completion of a college-ready curriculum. Currently, in sixteen states the SEA maintains data on the number of students completing the specific course sequence for a college-ready sequence of courses.<sup>60</sup> Many states currently (eleven) or plan to (seventeen) report, at the school level, the percentage of students completing this curriculum and graduating with a college- and career-ready diploma.<sup>61</sup>

Despite progress on collecting this data, few states are using it systemically; only a handful have incorporated it into accountability systems through performance goals, incentives, or accountability formulas.<sup>62</sup>

Information about student access to, participation in, and success with college-prep coursework can be captured by a number of school-level indicators, such as the percent of students completing a full college-prep course of study; percentage of students receiving a college- and career-ready diploma; percentage of students completing gateway courses (such as algebra II); and percentage of students who attempt or pass an honors or advanced course.

#### **Acknowledging and Addressing the Challenges with Course Quality and Course Labels**

Despite evidence that schools are offering more higher-level courses, and students are enrolling in them and getting good grades,<sup>63</sup> college remediation rates, lackluster employer surveys, and stagnant national trend data on twelfth-grade NAEP scores and college success rates demonstrate that too many students still graduate from high school without the skills necessary for success in college or the workplace. Multiple factors contribute to this discrepancy. The well-documented inconsistency in state standards and assessments leads to inconsistent (and low) expectations. Course labeling differs across states and districts, and, even within schools, classes with similar or identical course titles may vary significantly in substance, quality, academic intensity, and demand on students. Only twenty-nine states have a consistent statewide classification system for labeling courses.<sup>64</sup> And efforts by policymakers and education leaders to raise standards or graduation requirements are not usually accompanied by successful efforts to improve the instructional skills of educators teaching the more rigorous courses.

As a result, course-based indicators—such as completion of college-prep curriculum or a particular gateway course—are imperfect, in that they can demonstrate only which courses students have completed, not the content of those courses,<sup>65</sup> and few real measures of course quality currently exist.<sup>66</sup> Addressing these tensions requires action in three areas: 1) continued efforts to increase students' access to and participation in college-ready coursework; 2) collaboration among multiple stakeholders to improve the "truth in labeling" in course content through the improvement of standards, curriculum, grading policies, and standards of professional practice; and 3) strategies to improve educators' instruction skills and provide ongoing curricular and instructional support.

### **INDICATORS: Postsecondary Participation and Success**

An obvious way to measure a school's success in preparing students for college and careers is to observe the actual postsecondary participation and success of its students. There are numerous indicators of postsecondary success, including postsecondary institution enrollment, persistence, remediation, and degree completion; employment; military enlistment; and earnings.

Postsecondary participation and success information is gathered primarily in two ways: by surveying alumni or using data from postsecondary sources. For example, Kentucky requires every high school to conduct follow-up surveys of students after the first semester in college as a basis for calculating the state's definition of the "successful transition rate."<sup>67</sup> While tracking the postsecondary outcomes of students is beyond the capacity of most schools, states can collect such data through statewide longitudinal data systems. Given the

<sup>b</sup> Achieve, Inc., through its American Diploma Project, defines the college- and career-ready standards as four years each of challenging mathematics, including algebra II content, and grade-level English aligned with college- and career-ready standards.



growing interest in long-term student outcome data, many states are in the process of improving their ability to track students over time and conduct such analyses. For example, twenty-six states currently or plan to publicly report college remediation rates at the school level; however, less than a handful currently incorporate these into accountability systems through performance goals, incentives, or accountability formulas.<sup>68</sup>

As of 2008, twenty states were providing postsecondary feedback reports on high schools, including information about each high school graduate's participation in postsecondary education.<sup>69</sup> States' strategies for implementing postsecondary feedback reports—including how they collect data, produce the indicators, and report the information—vary significantly. For example, while most states include enrollment and remediation data in their feedback reports, only a handful report persistence rates and first-year grade point average, and even fewer provide data on degree completion or participation in the workforce.<sup>70</sup>

Some states have expanded the scope of the feedback reports beyond postsecondary and workforce participation. The Florida Department of Education, for example, annually reports for each public high school the number and percentage of graduates who have continued their education (through enrollment in district postsecondary institutions, state universities, private colleges or universities, or community colleges); are employed in the state, in federal military and civilian employment; receive TANF funds or food stamps; and are incarcerated or placed under community supervision. The department also reports graduates' earnings data.<sup>71</sup>

Systemic approaches for supporting the use of this data—beyond transparent reporting—are still emerging: only three states (Alaska, Florida, and Texas) require local officials to use this feedback data to inform the implementation of strategies to inform secondary school and district improvement planning.<sup>72</sup>

Current efforts are limited by the availability of data from various postsecondary stakeholders, such as institutions of higher education and workforce agencies. For example, only twenty-eight states currently have the ability to match student-level P–12 and higher education data,<sup>73</sup> though forty states can track individual students enrolled in public universities.<sup>74</sup> At least twelve states report efforts to integrate postsecondary data into their statewide data system,<sup>75</sup> and many states plan to use their new federal statewide longitudinal data system grant to improve data sharing with the postsecondary education or workforce data systems.<sup>76</sup>

There is likely to be progress made in this area soon: the American Recovery and Reinvestment Act of 2009 set as a requirement for some state funding that states establish a longitudinal data system with the ability to “provide information regarding the extent to which students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework.”<sup>77</sup> It remains to be seen how ED and the states will implement this provision.

Additionally, in most states college participation information is limited to the public institutions of higher education within the state. Yet the previously mentioned federal longitudinal study found that roughly 25 percent of undergraduates (and one in three African American undergraduates) began their postsecondary education in a different state than the state in which they graduated from high school.<sup>78</sup> In combination with the fact that many students attend private institutions of higher education, this means that the feedback reports paint an incomplete picture of high school students' postsecondary participation. Given the increasing degree of student mobility at all stages of their academic careers, there is growing interest from state and national policymakers and advocates in improving the ability to link students' data across states. There are other limitations to using college-success indicators at the high school level. For example, requirements for remediation vary across institutions. In addition, some observers will point out that several factors outside the control of the high school affect postsecondary education participation and success, such as financial restrictions and the quality of education provided at postsecondary institutions.<sup>79</sup>



## INDICATORS: School Climate

There is increasing interest in the use of additional indicators that reveal characteristics at the school level that are not drawn from student performance data. Common sense and daily experience indicate that the environment in which one operates influences an individual's ability and willingness to engage, perform, and succeed. In education, school climate—sometimes termed school culture or school environment—has an important impact on educators' and students' behaviors, and therefore student teaching, learning, and student outcomes. The Center for Social and Emotional Education (CSEE) describes school climate as "the quality and character of school life ... based on patterns of students', parents' and school personnel's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures."<sup>80</sup>

Research indicates that a positive school climate is an essential element of successful schools,<sup>81</sup> particularly in "beat-the-odds" high schools where researchers identify factors such as "culture"<sup>82</sup> or "personalized and orderly learning environment."<sup>83</sup> A growing body of research demonstrates the relationship between a positive school climate and academic outcomes (on-time progression through grades, higher grades, fewer dropouts); school behavior (fewer school suspensions and better engagement and attendance); youth development, risk prevention, and teacher retention.<sup>84</sup>

There is emerging agreement on a comprehensive definition of school climate. The CSEE and the Education Commission of the States lead the National School Climate Council,<sup>85</sup> a group of national policy and practice leaders, which has captured the opinions of researchers into a definition of school climate as well as the dimensions of school climate described in the box to the right. There are efforts under way to translate this consensus into voluntary national standards of school climate that would help guide the development of assessments, provide a framework for accountability, and inform educator-preparation programs.<sup>86</sup>

Unfortunately, the school climate field remains characterized by inconsistent and incomplete definitions, which cause confusion for education leaders and policymakers. Only twelve states use definitions of school climate that represent the broad set of dimensions supported by the research. Instead, many states either have vague, meaningless definitions or focus on only one dimension of school climate, both of which can mislead practitioners and undermine the quality of measurements or improvement strategies based on them.<sup>87</sup>

In addition, the concept of improving school climate is still emerging, and there are concerns that some school climate measures are not scientifically sound or not linked to evidence-based improvement efforts.<sup>88</sup> The most common ways to measure school climate are stakeholder surveys, focus groups, interviews, and observational methods. In a recent article, national school climate leaders asserted that the best school climate measures 1) are developed in a scientifically sound manner; 2) recognize student, parent, and school personnel voices; and 3) assess all the dimensions of school climate, and note that very few existing measures meet these expectations.<sup>89</sup> Two such assessments are the High Performance Learning Community Assessment, developed by the National Center on Public Education and Social Policy and used by more than 3,100 schools over the past twenty years, and the Comprehensive School Climate Inventory, developed by CSEE and used by more than 100,000 students, parents, and educators across sixteen states over the past three years.<sup>90</sup> Both tools are evidence based, developed around a comprehensive set of school climate dimensions, and linked to a set of guidelines that support a school climate improvement process.<sup>91</sup>

States and districts are increasingly interested in school climate improvement efforts and using school climate to help define, measure, and improve school success. For example, three states (North Carolina, Rhode Island, and South Carolina) conducted annual or biannual teacher surveys statewide to measure school climate; and fifteen additional states are engaged in less comprehensive efforts to measure school climate, such as voluntary teacher surveys, parent or student surveys, and data collections that include some but not all schools.<sup>92</sup> Districts are also beginning to embrace these measures: for example, both the New York City Department of Education and the Chicago Public Schools have developed school climate surveys, results of which are incorporated into the accountability system and shared publicly on every school's public report card or progress report. Others, such as Minneapolis Public Schools, have developed voluntary climate tools.

### Dimensions of School Climate

Safety	<ul style="list-style-type: none"> <li>• <b>Rules and norms:</b> Clearly communicated rules about physical violence and verbal abuse and clear and consistent enforcement.</li> <li>• <b>Physical safety:</b> Sense that students and adults feel safe from physical harm in the school.</li> <li>• <b>Social and emotional security:</b> Sense that students feel safe from verbal abuse, teasing, and exclusion.</li> </ul>
Teaching and Learning	<ul style="list-style-type: none"> <li>• <b>Support for learning:</b> Supportive teaching practices, such as constructive feedback and encouragement for positive risk taking, academic challenge, individual attention, and opportunities to demonstrate knowledge and skills in a variety of ways.</li> <li>• <b>Social and civic learning:</b> Support for the development of social and civic knowledge and skills, including effective listening, conflict resolution, reflection and responsibility, and ethical decisionmaking.</li> </ul>
Interpersonal Relationships	<ul style="list-style-type: none"> <li>• <b>Respect for diversity:</b> Mutual respect for individual differences at all levels of the school—student-student, adult-student, and adult-adult.</li> <li>• <b>Social support—adults:</b> Collaborative and trusting relationships among adults and adult support for students in terms of high expectations for success, willingness to listen, and personal concern.</li> <li>• <b>Social support—students:</b> Network of peer relationships for academic and personal support.</li> </ul>
Institutional Environment	<ul style="list-style-type: none"> <li>• <b>School connectedness/engagement:</b> Positive identification with the school, a sense of belonging, and norms for broad participation in school life for students and families.</li> <li>• <b>Physical surroundings:</b> Cleanliness, order, and appeal of facilities and adequate resources and materials.</li> </ul>

Adapted from J. Cohen, T. Pickeral, and M. McCloskey, "The Challenge of Assessing School Climate," *Educational Leadership* 66, no. 44 (2009).



## Using High School Performance Indicators

Embedding additional indicators in the high school accountability and school improvement process raises a number of issues that policymakers will need to address.

**Developing multiple-indicator systems:** An accountability and school improvement system that includes multiple indicators must define how the indicators work together. For example, indicators can be used as part of indexes, point systems, or grading systems. The box on the next page describes how three different education systems (Kentucky, New York City, and Chicago) have created multiple-indicator high school accountability and improvement systems. How these indicators interact and are weighted sends signals about the relative importance of each indicator. As noted previously, there is no one right way of creating indicator systems; this is an area of education policy that needs experimentation, documentation, and research.

**Understanding relationships between indicators:** In developing these accountability and school improvement ratings, policymakers must be cognizant of the relationships between indicators so they do not create unintended consequences. This lesson was learned through the implementation of AYP: setting annual improvement targets for test scores but not graduation rates created an incentive to improve test scores at the expense of graduation rates, thereby rewarding the pushing out of low-performing students. It may be that measures of progress should be equally balanced with measures of achievement. For example, the use of course-based indicators (such as completion of a college- and career-ready course of study) may need to be balanced with an indicator of success on college-ready assessments.

**Analyzing progress on high school performance indicators:** In setting annual progress goals for the high school performance indicators, policymakers must decide how progress will be measured. If the system measures progress on individual indicators, a goal or improvement target should be set, such as 90 percent average daily attendance or improving attendance rates 5 percentage points annually, respectively, based on research, state or district averages, or high-performing high schools. If the system uses a composite system, this could translate into, for example, an increase in the index score by a certain number of points, or moving from a “C” school to a “B” school. There is increasing interest in progress models that take into account both the overall performance and the improvement.<sup>93</sup>

**Building the technical infrastructure to collect indicator data:** Embedding additional indicators in the high school accountability and school improvement process will require more data elements to be defined, collected, and reported. As states and districts develop high school performance indicators, inconsistencies across states may create a demand for joint efforts to develop common definitions for certain indicators—as was the case with high school graduation rates, for example. As discussed throughout this publication, states are in various stages in terms of how they relate to these issues.

This means that decisions to use high school performance indicators must be accompanied by smart policies to address these data issues and invest in the capacity of data systems at the state and district levels. Fortunately, there is growing support for data systems from national and state leaders. Through three rounds of the federal Statewide Longitudinal Data Systems program, forty-one states have received funding to design, develop, and implement statewide longitudinal data systems. Significant funding for this program was included in the 2009 stimulus package, and there are signals that support for this program will continue through the regular budget and appropriations process. There is an opportunity to leverage these and future funds to help states and districts define and collect data that is necessary for producing high school performance indicators.



**Building educators' capacity to use high school performance indicators:** Of course, data can only drive improvement if it is used. Moreover, there is a growing recognition that educators and education leaders need training and support to be able to transform raw data into actionable knowledge. Across the nation, state and district leaders are developing strategies to support this work. For example, most states have developed data tools—such as templates, rubrics, needs assessments, and online protocols—to help educators use data to develop improvement plans, and forty states have assigned SEA staff to support schools with these efforts.<sup>94</sup> Many large districts are developing processes for supporting school-level efforts to analyze and use data, and for holding school leaders accountable for these efforts—such as through Chicago's Instructional Leadership Councils, which focus on ninth-grade on-track data, or New York City's Inquiry Team Process, which uses the many data points in schools' Annual Progress Reports.

### Examples of Multiple-Indicator High School Accountability and Improvement Systems

**Chicago, Illinois:** Every high school in Chicago receives a Performance Policy Score that takes into account a number of indicators, including schools' growth and trend data on those indicators. Schools can earn a total of up to thirty-six points and are placed into one of three levels (probation, good standing, level of excellence) based on the percent of points earned. Schools earn points for the percent of students meeting and exceeding standards on the state reading, math, and science tests and the student gains on ACT tests. Schools also earn points for average ACT scores, one-year dropout rates, percent of on-track freshmen, attendance rates, and AP enrollment and success rates. For this second set of indicators, schools can earn points for both the current status (average of the last two years) and the trend (difference between last year's score and the average of the three previous years).<sup>95</sup>

**Kentucky:** Kentucky's Commonwealth Accountability Testing System (CATS) provides "as complete a snapshot of schools as possible and communicate[s] to schools the importance of each measure and indicator in terms of resources and instructional programs." Indicators include criterion-referenced tests in reading, mathematics, science, social studies, arts and humanities, practical living/vocational studies, and writing; nationally norm-referenced test in mathematics and reading; and other measures, including attendance rates, retention rates, dropout rates, and transition to adult life. These indicators are combined into a composite Accountability Index with a value of 1 to 100. The index takes into account a number of measures of growth and improvement.<sup>96</sup> Every two years, schools are expected to increase their index score, toward the goal of 100 in 2014. Schools falling short of their goals receive a Scholastic Audit and the assistance of a Highly Skilled Educator, and are eligible to receive state funds to be targeted toward improvement. The Scholastic Audits are performed by state, regional, and local district staff and provide audited schools with information on more than eighty indicators related to school success.<sup>97</sup>

**New York City:** Every New York City high school receives a Progress Report and a Quality Review Score. The Progress Report culminates in a letter grade (A–F) overall and in three categories: 1) School Environment (based on attendance and the results of parent, student, and teacher surveys); 2) Student Performance (based on diploma counts and graduation rates); and 3) Student Progress (based on credit accumulation and completion and pass rates on the state's Regents exams). These indicators are weighted, and results are compared to both high schools citywide and peer groups of up to forty similar high schools. As part of the Quality Review, a team of experienced educators observe classroom teaching; use of data, planning, programs, design, and implementation; and staff collaboration. The resulting Quality Review Score (outstanding, well developed, proficient, underdeveloped with proficient features, or underdeveloped) illustrates how well a school is organized to improve student achievement. A school's Progress Report and Quality Review Score are used to determine eligibility for rewards, supports from the district, and consequences such as leadership changes or closure.<sup>98</sup>





## **Federal Policy Recommendations**

The nation faces a dual education challenge: address the dropout crisis, and shift the goal of the public school system to college and career readiness for all students. Educators, leaders, and advocates at levels seeking solutions for this challenge have adopted the notion that data-driven decisionmaking is critical to their efforts. By embracing indicators of college and career readiness and embedding actionable high school performance indicators into the accountability and school improvement system, federal policymakers can help leverage action at the state and local levels to improve teaching, learning, and student outcomes. Specifically, federal policymakers should:

- Establish college and career readiness as the graduation goal for all students and high schools.
- Improve national indicators for measuring college- and career-ready graduation by
  - *supporting the effort to develop common national standards and assessments aligned to college and career readiness;*
  - *ensuring graduation rates are defined commonly as described in the 2008 regulations; and*
  - *refining AYP to weight these indicators equally and include meaningful progress goals for both.*
- Reinvent the high school accountability and school improvement process to include multiple high school performance indicators by
  - *replacing the federal system with requirements and supports for a differentiated high school accountability and improvement system at the state and district levels; and*
  - *requiring states and districts to include in these systems a set of school performance indicators, with annual progress goals, that will be used to differentiate among low-performing high schools, plan interventions, drive resources, and measure progress.*
- Invest in state and local data systems that can efficiently collect, analyze, and communicate high school performance indicators and other data.
- Build capacity of educators and education leaders to use high school performance indicators.
- Invest in research activities to inform the use of various high school performance indicators.

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## Endnotes

- <sup>1</sup> K. Carey, *Reality Check: Tracking Grads Beyond High School* (Washington, DC: Education Sector, 2007).
- <sup>2</sup> R. Herman et al., *Turning Around Chronically Low-Performing Schools: A Practice Guide* (Washington, DC: U.S. Department of Education, 2008).
- <sup>3</sup> C. Hammond et al., *Dropout Risk Factors and Exemplary Programs* (Clemson, SC: National Dropout Prevention Center, Communities in Schools, Inc., 2007); National Center for Education Statistics, *National Education Longitudinal Study of 1988: Characteristics of At-Risk Students in NELS:88* (Washington, DC: U.S. Department of Education, 1992); J. Railsback, *Increasing Student Attendance: Strategies for Research and Practice* (Portland, OR: Northwest Regional Educational Laboratory, 2004).
- <sup>4</sup> National Center for Education Statistics, *National Education Longitudinal Study of 1988*.
- <sup>5</sup> Consortium on Chicago School Research, *Freshman Year: The Make-It or Break-It Year* (Chicago Consortium on School Research, 2007).
- <sup>6</sup> D. Silver, M. Saunders, and E. Zarate, *What Factors Predict High School Graduation in the Los Angeles Unified School District* (Santa Barbara, CA: California Dropout Research Project, UCLA, 2008).
- <sup>7</sup> J. M. Bridgeland et al., *The Silent Epidemic* (Washington, DC: Civic Enterprises, 2006).
- <sup>8</sup> R. Rumberger and S. Thomas, "The Distribution of Dropout and Turnover Rates Among Urban and Suburban High Schools," *Sociology of Education* 73 (2002): 39–67.
- <sup>9</sup> Analysis of data from [http://schools.nyc.gov/NR/rdonlyres/F5AE43F4-2A4D-4484-9538-65BBE8ECBD86/0/progress\\_report\\_data\\_hs.xls](http://schools.nyc.gov/NR/rdonlyres/F5AE43F4-2A4D-4484-9538-65BBE8ECBD86/0/progress_report_data_hs.xls).
- <sup>10</sup> Railsback, *Increasing Student Attendance*.
- <sup>11</sup> National Forum for Education Statistics, *Every School Day Counts: The Forum Guide on Collecting and Using Attendance Data* (Washington, DC: U.S. Department of Education, 2009).
- <sup>12</sup> Data Quality Campaign, "Element 2," [www.dataqualitycampaign.org/files/element2\\_survey\\_responses.pdf](http://www.dataqualitycampaign.org/files/element2_survey_responses.pdf) (accessed May 8, 2009).
- <sup>13</sup> National Forum for Education Statistics, *Every School Day Counts*.
- <sup>14</sup> National Center for School Engagement, *Guidelines for a National Definition of Truancy and Calculating Rates* (Denver, CO: Author, 2006).
- <sup>15</sup> E. M. Allensworth and J. Q. Easton, *What Matters for Staying on Track and Graduating in Chicago Public High Schools* (Chicago: Consortium on Chicago School Research, 2007).
- <sup>16</sup> Ibid.
- <sup>17</sup> Ibid.
- <sup>18</sup> Silver, Saunders, and Zarate, *What Factors Predict High School Graduation*.
- <sup>19</sup> G. Hampden-Thompson, S. Warkentien, and B. Daniel, *Course Credit Accrual and Dropping Out of High School, by Student Characteristics* (Washington, DC: U.S. Department of Education, 2009).
- <sup>20</sup> M. Lyles, "Office of Multiple Pathways to Graduation Data Presentation: Population, Models, and Progress to Date," presentation at "Multiple Pathways to Success: Graduation and Beyond," March 6, 2009.
- <sup>21</sup> R. Balfanz, "Interpreting Promoting Power, Dropout Rates, Graduation Rates, and the term 'Dropout Factory' in Your Community: Frequently Asked Questions," [http://web.jhu.edu/CSOS/images/FAQ\\_Dropout\\_Factories\\_final\\_version\\_nov\\_2007.pdf](http://web.jhu.edu/CSOS/images/FAQ_Dropout_Factories_final_version_nov_2007.pdf) (accessed May 8, 2009).
- <sup>22</sup> Everyone Graduates Center, <http://www.every1graduates.org/index.html> (accessed May 8, 2009).
- <sup>23</sup> R. C. Neild and R. Balfanz, *Unfulfilled Promise: The Dimensions and Characteristics of Philadelphia's Dropout Crisis, 2000–2005* (Baltimore, MD: Center for Social Organization of Schools, Johns Hopkins University, 2006).
- <sup>24</sup> Parthenon Group, *Boston Public Schools: Strategic Planning to Serve Off-Track Youth* (Boston: Data Review and Strategic Implications, 2007).
- <sup>25</sup> Allensworth and Easton, *What Matters for Staying on Track*.
- <sup>26</sup> S. R. Miller, E. Allensworth, and J. R. Kochanek, *Student Performance: Course Taking, Test Scores, and Outcomes* (Chicago: Consortium on Chicago School Research, 2002).
- <sup>27</sup> L. M. Pinkus, *Using Early-Warning Data to Improve Graduation Rates: Closing Cracks in the Education System* (Washington, DC: Alliance for Excellent Education, 2008).
- <sup>28</sup> College Board, *5th Annual AP® Report to the Nation, Appendix A* (New York: Author, 2009); ACT, Inc., "College Readiness: Benchmarks Met," <http://www.act.org/news/data/08/benchmarks.html> (accessed May 8, 2009).
- <sup>29</sup> ACT, Inc., "Selected State Data," <http://www.act.org/news/data/08/map/index.html> (accessed May 8, 2009).
- <sup>30</sup> Achieve, Inc., *American Diploma Project Algebra II End-of-Course Exam: 2008 Annual Report* (Washington, DC: Author, 2008).
- <sup>31</sup> D. T. Conley, *Toward a More Comprehensive Conception of College Readiness* (Eugene, OR: Educational Policy Improvement Center, 2007).
- <sup>32</sup> R.D. Muller and A. Beatty, *Work Readiness Certification and Industry Credentials: What Do State High School Policy Makers Need to Know?* (Washington, DC: Achieve, 2009).
- <sup>33</sup> Achieve, Inc., "What Is College and Career Ready?" <http://www.achieve.org/files/CollegeandCareerReady.pdf> (accessed May 8, 2009).
- <sup>34</sup> Editorial Projects in Education, *Broader Horizons: The Challenge of College Readiness for All Students* (Washington, DC: Author, 2009).
- <sup>35</sup> ACT, Inc., *What Are ACT's College Readiness Benchmarks?* (Iowa City, IA: Author, 2005).
- <sup>36</sup> C. Dougherty, L. Mellor, and S. Jian, *The Relationship Between Advanced Placement and College Graduation* (Austin, TX: National Center for Educational Accountability, 2006).
- <sup>37</sup> College Board, *5th Annual AP® Report to the Nation* (NY: Author, 2009).
- <sup>38</sup> Achieve, Inc., *Closing the Expectations Gap 2009: Fourth Annual 50-State Progress Report on the Alignment of High School Policies with the Demands of College and Careers* (Washington, DC: Author, 2009).
- <sup>39</sup> Data Quality Campaign, "Element 7—College Readiness Scores," [http://dataqualitycampaign.org/files/element7\\_survey\\_responses.pdf](http://dataqualitycampaign.org/files/element7_survey_responses.pdf) (accessed May 8, 2009).
- <sup>40</sup> Achieve, Inc., *Closing the Expectations Gap 2009*.
- <sup>41</sup> C. Adelman, *The Toolbox Revisited: Paths to Degree Completion from High School Through College* (Washington, DC: U.S. Department of Education, 2006).
- <sup>42</sup> ACT, Inc., *Crisis at the Core: Preparing All Students for College and Work* (Iowa City, IA: Author, 2004).
- <sup>43</sup> B. Gong, *Relationships Between Student Performance on the MCAS and Other Tests, Prepared for the Massachusetts Department of Education* (Dover, NH: The National Center for the Improvement of Educational Assessment, Inc., 1999).



- <sup>44</sup> Silver, Saunders, and Zarate, *What Factors Predict High School Graduation*.
- <sup>45</sup> A. Abraham and J. Creech, *Reducing Remedial Education: What Progress Are States Making?* (Atlanta, GA: Southern Regional Education Board, 2002).
- <sup>46</sup> Adelman, *The Toolbox Revisited*.
- <sup>47</sup> M. Ewing, *The AP Program and Student Outcomes: A Summary of Research* (New York: The College Board, 2006).
- <sup>48</sup> Achieve, Inc., *Rising to the Challenge: Are High School Graduates Prepared for College and Work?* (Washington, DC: Author, 2005).
- <sup>49</sup> ACT, Inc., “2008 ACT College Readiness Report News Release,” <http://www.act.org/news/releases/2008/crr.html> (accessed May 11, 2009).
- <sup>50</sup> C. Shettle et al., *America’s High School Graduates: Results from the 2005 NAEP High School Transcript Study* (Washington, DC: U.S. Department of Education, 2007).
- <sup>51</sup> Silver, Saunders, and Zarate, *What Factors Predict High School Graduation*.
- <sup>52</sup> ACT, Inc., and the Education Trust, *On Course for Success: A Close Look at Selected High Schools That Prepare All Students for College* (Iowa City, IA, and Washington, DC: Authors, 2004).
- <sup>53</sup> M. Planty, S. Provasnik, and B. Daniel, *High School Coursetaking: Findings from the Condition of Education 2007* (Washington, DC: U.S. Department of Education, 2007).
- <sup>54</sup> College Board, *5th Annual AP® Report to the Nation, Appendix A* (New York: Author, 2009); ACT, Inc., “College Readiness: Benchmarks Met,” <http://www.act.org/news/data/08/benchmarks.html> (accessed May 8, 2009).
- <sup>55</sup> Adelman, *The Toolbox Revisited*.
- <sup>56</sup> *Ibid.*
- <sup>57</sup> *Ibid.*; B. Dalton et al., *Advanced Mathematics and Science Coursetaking in the Spring High School Senior Classes of 1982, 1992, and 2004* (Washington, DC: U.S. Department of Education, 2007).
- <sup>58</sup> Government Accountability Office, *Federal Student Aid: Recent Changes to Eligibility Requirements and Additional Efforts to Promote Awareness Could Increase Academic Competitiveness and SMART Grant Participation* (Washington, DC: Government Printing Office, 2009).
- <sup>59</sup> Achieve, Inc., *Closing the Expectations Gap 2009*.
- <sup>60</sup> Data Quality Campaign, “College Course Completion,” [http://www.dataqualitycampaign.org/files/element6\\_survey\\_responses.pdf](http://www.dataqualitycampaign.org/files/element6_survey_responses.pdf) (accessed May 11, 2009).
- <sup>61</sup> Achieve, Inc., *Closing the Expectations Gap 2009*.
- <sup>62</sup> *Ibid.*
- <sup>63</sup> Shettle et al., *America’s High School Graduates*.
- <sup>64</sup> Data Quality Campaign, “Element 6—Course Completion Data.”
- <sup>65</sup> Adelman, *The Toolbox Revisited*; Conley, *Toward a More Comprehensive Conception*; Planty, Provasnik, and Daniel, *High School Coursetaking*; Achieve, Inc., and Education Trust, *Measures That Matter: Making College and Career Readiness the Mission for High Schools: A Guide for State Policymakers* (Washington, DC: Authors, 2009).
- <sup>66</sup> Conley, *Toward a More Comprehensive Conception*.
- <sup>67</sup> C. Christle, K. Jolivette, and N. Michael, “School Characteristics Related to High School Dropouts,” *Remedial and Special Education* 28, no.6 (2007): 325–39.
- <sup>68</sup> Achieve, Inc., *Closing the Expectations Gap 2009*.
- <sup>69</sup> Hanover Research Council, *Measuring the Participation Rate of High School Graduates in Postsecondary Education: A State-by-State Analysis of Data Collection Methodologies and College Enrollment Rates*, prepared for College Summit (Washington, DC: Author, 2008).
- <sup>70</sup> Hanover Research Council, *Measuring the Participation Rate*; Education Commission of the States, “Postsecondary Feedback Systems: Are Schools and/or Districts Required to Use This Data for School Improvement Purposes?” <http://mb2.ecs.org/reports/Report.aspx?id=1779> (accessed May 7, 2009).
- <sup>71</sup> *Ibid.*
- <sup>72</sup> Education Commission of the States, “Postsecondary Feedback Systems.”
- <sup>73</sup> Data Quality Campaign, “10 Essential Elements of a State Longitudinal Data System,” <http://www.dataqualitycampaign.org/survey/elements> (accessed May 7, 2009).
- <sup>74</sup> P. Ewell and M. Boeke, *Critical Connections: Linking States’ Unit Record Systems to Track Student Progress* (Boulder, CO: National Center for Higher Education Management Systems, 2007).
- <sup>75</sup> Institute for Education Sciences, U.S. Department of Education, “Features Summary FY06 and FY07 Grantees,” <http://nces.ed.gov/Programs/SLDS/summary.asp> (accessed May 7, 2009).
- <sup>76</sup> Analysis of IES FY 2009 grantee project abstracts, <http://nces.ed.gov/Programs/SLDS/stateinfo.asp> (accessed May 7, 2009).
- <sup>77</sup> American Recovery and Reinvestment Act of 2009, Public Law 111-5, 110th Cong., 1st sess.; America Competes Act, Public Law 110-69, 110th Cong., 2nd sess.
- <sup>78</sup> Adelman, *The Toolbox Revisited*.
- <sup>79</sup> Carey, *Reality Check*.
- <sup>80</sup> J. Cohen et al., “School Climate: Research, Policy, Practice, and Teacher Education,” *Teachers College Record* 11, no. 1 (2009): 180–213.
- <sup>81</sup> J. R. Bliss, W. A. Firestone, and C. E. Richards, eds., *Rethinking Effective Schools: Research and Practice* (Englewood Cliffs, NJ: Prentice Hall, 2001); S. C. Carter, *No Excuses: Lessons from High-Performing, High-Poverty Schools* (Washington, DC: The Heritage Foundation, 2000); Cohen, Pickeral, and McCloskey, “The Challenge of Assessing School Climate”; R. DuFour, “The Learning Centered Principal,” *Educational Leadership* 59, no. 8 (2000): 12–15; R. DuFour and R. Eaker, *Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement* (Bloomington, IN: National Educational Service, 1998); R. R. Edmonds, “Effective Schools for the Urban Poor,” *Educational Leadership* 37, no. 1 (1979): 15–18, 20–24; R. Edmonds, “Some Schools Work and More Can,” *Social Policy* 9, no. 5 (1979): 28–32; W. K. Hoy and J. Hannum, “Middle School Climate: An Empirical Assessment of Organizational Health and Student Achievement,” *Educational Administration Quarterly* 33, no. 3 (1997): 290–311; L. Lezotte, *Revolutionary and Evolutionary: The Effective Schools Movement* (Okemos, MI: Effective Schools Products, Ltd., 2001).



- <sup>82</sup> S. Robinson, *Gaining Traction, Gaining Ground: How Some High Schools Accelerate Learning for Struggling Students* (Washington, DC: Education Trust, 2005).
- <sup>83</sup> J. Quint, *Meeting Five Critical Challenges of High School Reform: Lessons from Research on Three Reform Models* (New York: MDRC, 2006).
- <sup>84</sup> University-Community Partnerships at Michigan State University, *School Climate and Learning* (East Lansing, MI: Author, 2004).
- <sup>85</sup> Cohen, Pickeral, and McCloskey, "The Challenge of Assessing School Climate."
- <sup>86</sup> National School Climate Council, *National School Climate Standards: An Introduction (Draft)*. Cited with permission.
- <sup>87</sup> Cohen, Pickeral, and McCloskey, "The Challenge of Assessing School Climate."
- <sup>88</sup> Ibid.
- <sup>89</sup> Adapted from *ibid*.
- <sup>90</sup> Comprehensive School Climate Inventory, <http://www.schoolclimate.org/index.php/programs/csci/> (accessed May 8, 2009).
- <sup>91</sup> Cohen et al., "School Climate: Research, Policy, Practice, and Teacher Education."
- <sup>92</sup> B. Ho, "Few States Survey Teachers on School Climate," *Education Week* (accessed May 8, 2009).
- <sup>93</sup> Achieve, Inc., and Education Trust, *Measures That Matter*; Forum on Educational Accountability, *Assessment and Accountability for Improving Schools and Learning: Principles and Recommendations for Federal Law and State and Local Systems Forum on Educational Accountability* (Washington, DC: Forum on Educational Accountability, 2007); "A Letter from Selected Civil Rights Groups on Multiple Measures," [http://www.fairtest.org/files/MultipleMeasuresCRletter%20\\_5\\_.pdf](http://www.fairtest.org/files/MultipleMeasuresCRletter%20_5_.pdf) (accessed August 7, 2007).
- <sup>94</sup> K. C. LeFloch, A. Boyle, and S. B. Therriault, *State Systems of Support Under NCLB* (Washington, DC: American Institutes for Research, 2008).
- <sup>95</sup> Chicago Public Schools, *CPS Performance Policy Calculator Tutorial, High School Version* (Chicago: Author, 2008).
- <sup>96</sup> Kentucky Department of Education, *2003 CATS Interpretive Guide, Detailed Information About How to Use Your Score Reports* (Frankfurt, KY: Author, 2003).
- <sup>97</sup> Kentucky Department of Education, "Accountability System, Updated May 2, 2009," <http://www.kde.state.ky.us/KDE/Administrative+Resources/Testing+and+Reporting+/CATS/Accountability+System/> (accessed May 20, 2009).
- <sup>98</sup> New York City Department of Education, *Educator Guide: The New York City Progress Report, High School* (New York, NY: Author, 2009).

*The mission of the Alliance for Excellent Education is to promote high school transformation to make it possible for every child to graduate prepared for postsecondary learning and success in life.*

*The Alliance for Excellent Education is a national policy and advocacy organization, based in Washington, DC, working to improve national and federal policy so that all students can achieve at high academic levels and graduate high school ready for success in college, work, and citizenship in the twenty-first century.*

The Alliance has developed a "Framework for Action to Improve Secondary Schools," that informs a set of federal policy recommendations based on the growing consensus of researchers, practitioners, and advocates about the challenges and solutions for improving secondary student learning.

The framework, shown graphically here, encompasses seven policy areas that represent key leverage points in ensuring a comprehensive, systematic approach to improving secondary education. The framework also captures three guiding principles that apply to all of the policy areas. Although the appropriate federal role varies from one issue area to another, they are all critically important to reducing dropouts and increasing college and work readiness.

