education sector reports

Ready by Design: A College and Career Agenda for California

By Anne Hyslop and Bill Tucker

EDUCATIONSECTOR
www.educationsector.org

ACKNOWLEDGEMENTS

Our appreciation to the many people who shared information with us about their programs, schools, and districts, and to those who took the time to review an earlier draft of this report, including Carrie Hahnel, Gary Hoachlander, Jordan Horowitz, Richard Kazis, Ace Parsi, Arun Ramanathan, Vince Stewart, Joel Vargas, and Andrea Venezia. In particular, we would like to thank the Institute for Evidence-Based Change for their partnership and collaboration and the Californians who met with us over a year ago to jumpstart this project—their candid insights helped set the tone for all of our subsequent work. Thanks also to Rikesh Nana, who provided valuable research assistance, and to Susan Headden for her patience and level head while editing this report.

This report was funded by the James Irvine Foundation. Education Sector thanks the foundation for its support. The views expressed in the paper are those of the authors alone.

ABOUT THE AUTHOR

ANNE HYSLOP is a policy analyst at Education Sector. She can be reached at ahyslop@educationsector.org.

BILL TUCKER is deputy director, policy development at the Bill & Melinda Gates Foundation and former managing director of Education Sector. He can be reached at bill.tucker@gatesfoundation.org.

ABOUT EDUCATION SECTOR

Education Sector is an independent think tank that challenges conventional thinking in education policy. We are a nonprofit, nonpartisan organization committed to achieving measurable impact in education, both by improving existing reform initiatives and by developing new, innovative solutions to our nation's most pressing education problems.

1201 Connecticut Ave., N.W., Suite 850, Washington, D.C. 20036
202.552.2840 • www.educationsector.org

Nestled on 76 acres in the foothills of the Cuyamaca Mountains, East San Diego County's West Hills High School has many of the hallmarks of a solid school. Its middle-class students consistently master state standards, perform well on state achievement tests, and graduate at a high rate. But four years ago, school leaders realized they had a big problem. A stunning 95 percent of the top students in senior English courses who were headed to nearby community colleges failed the colleges' English placement tests. Deemed unprepared for college-level work, these former honor roll students were waylaid on the path to a college diploma and consigned to costly remedial courses.

Alarmed, West Hills' teachers joined with faculty at the Grossmont-Cuyamaca Community College District to see what had gone awry. They investigated years of student transcripts, exchanged lesson plans, and shared curricula. The process was grueling, and what they learned surprised them. The high remediation rates, it turned out, were not the fault of ineffective teaching, unmotivated students, or unrealistic college expectations. Everybody—the students, the teachers, the high school, the college—was doing exactly what they were supposed to be doing. The problem was that they weren't doing it in sync. Students weren't prepared for college because their high school English classes were teaching them something entirely different from what the college expected them to learn.

Odd as it may seem, getting students ready to succeed in college, and in careers, was not what West Hills' English courses were actually designed to do. Although California's K–12 content standards in English language arts—among the strongest in the country and the basis for West Hills' English curriculum—purportedly prepare students for graduation and postsecondary work, high school teachers focused on literature and emphasized fictional characters and storylines.[1] Colleges and workplaces, by contrast, stressed argumentation skills, analytical thinking, and writing clearly to inform, persuade, and describe. With assistance from a state-based nonprofit, the Institute for Evidence-Based Change, educators in San Diego began to redesign their teaching aligned to the new goal—readiness for life after high school instead of just finishing high school. And, they started seeing results: students who earn A's or B's in English now bypass placement tests and go straight into college-level courses, where nearly 90 percent succeed.[2]

It might seem obvious that students would have a better chance of success post-high school if the system set that success as a goal. The students want it, their parents want it, and teachers are dedicated to it.[3] The economy, with its hunger for high-skilled, highly trained, and college-educated workers, demands it. The state of California has formally embraced postsecondary readiness as the goal for high school graduates by adopting, in August 2010, the new multi-state educational standards known as the Common Core State Standards. Despite these commitments, California remains stuck in a bifurcated system that was designed to separate K–12 and higher education, leading to mismatched expectations on both sides.

California has clearly defined its new goal. Now it needs to redesign its educational system to meet it. A system that is truly focused on postsecondary readiness would be giving its educators detailed information about how their students fare after

graduation so they could learn whether those students were ready for college or the workforce, and if they weren't, how they could be served better. A system like this would provide incentives to help support students as they transition to college and career. Its school accountability metrics would include critical indicators and evidence of preparation. All of these things would encourage K–12, college, and industry leaders to work closely together to ensure that teaching is aligned to postsecondary success. As a state, California has yet to systematically do any of these things. Instead, it continues to educate its students under a system that only values basic proficiency on standardized tests.

Academic achievement and high scores on California's standardized tests are, and will continue to be, essential indicators of student achievement. But they are only one among many elements that must be weighed to judge postsecondary readiness and success; they are not, as they are treated now, the main goal. And while using test data to drive practice is important, those data gain meaning only when college and career readiness is embedded in standards, curriculum, teaching, and overall expectations for students.

While most are still far from this important goal, there are several California districts and schools leading the way.

While most are still far from this important goal, there are several California districts and schools leading the way. These trailblazers are showing that they are serious about postsecondary readiness by tracking new achievement and growth data, engaging in productive community partnerships, and designing new models not only to improve academic instruction, but also to boost student support, parental engagement, and most important, academic expectations. For these schools, getting students to graduation is not enough. They are going the distance, building systems to make sure that their students are prepared to succeed in college classrooms, in military service, or in training programs for high-skilled jobs. Without any significant state investment, these schools have seen remarkable outcomes. To be sure, California is suffering under severe budgetary restraints. But with the political will, the state could both strengthen these local efforts and enable hundreds more.

What's Measured Is What Matters

School performance in California can be boiled down to one number: the Academic Performance Index. The API, as it is commonly known, is essentially a measure of student proficiency on relatively low-level standardized tests.[4] For over a decade, all California schools have received a base API score—between 200 and 1,000—and a target score for growth in the following year. The state encourages all schools to score at least an 800, and the stakes are high. Newspapers prominently feature the rankings in annual school guides. Real estate agents tout them to homebuyers. Because the API is tied to making adequate yearly progress under the federal No Child Left Behind Act, schools with low API scores can face sanctions including restructuring or closure. And parents can invoke low test scores under a new law allowing them to petition for more control over low-performing schools, including replacing staff or converting the school into a charter.

Critics believe the API pressures teachers to "teach to the test" since a school's API score is based solely on student test scores (state law also requires graduation rates to be considered, but they have not yet been included).[5] In high schools, there are two kinds of tests: the Standardized Testing and Reporting assessments (STAR) in English, math, science, and social studies, and the California High School Exit Exam (CAHSEE). But performance standards on the STAR and CAHSEE tests are not benchmarked to college and career readiness. In some cases, they don't even come close. For instance, the CAHSEE tests students on math content they should have mastered in grades 6 and 7 and in Algebra I. The content of the English language arts section is based on standards from grades 9 and 10. Given the basic level of knowledge required, it's no surprise that nearly 70 percent of students in 2011 passed the CAHSEE by the end of 10th grade.[6] Although these test results

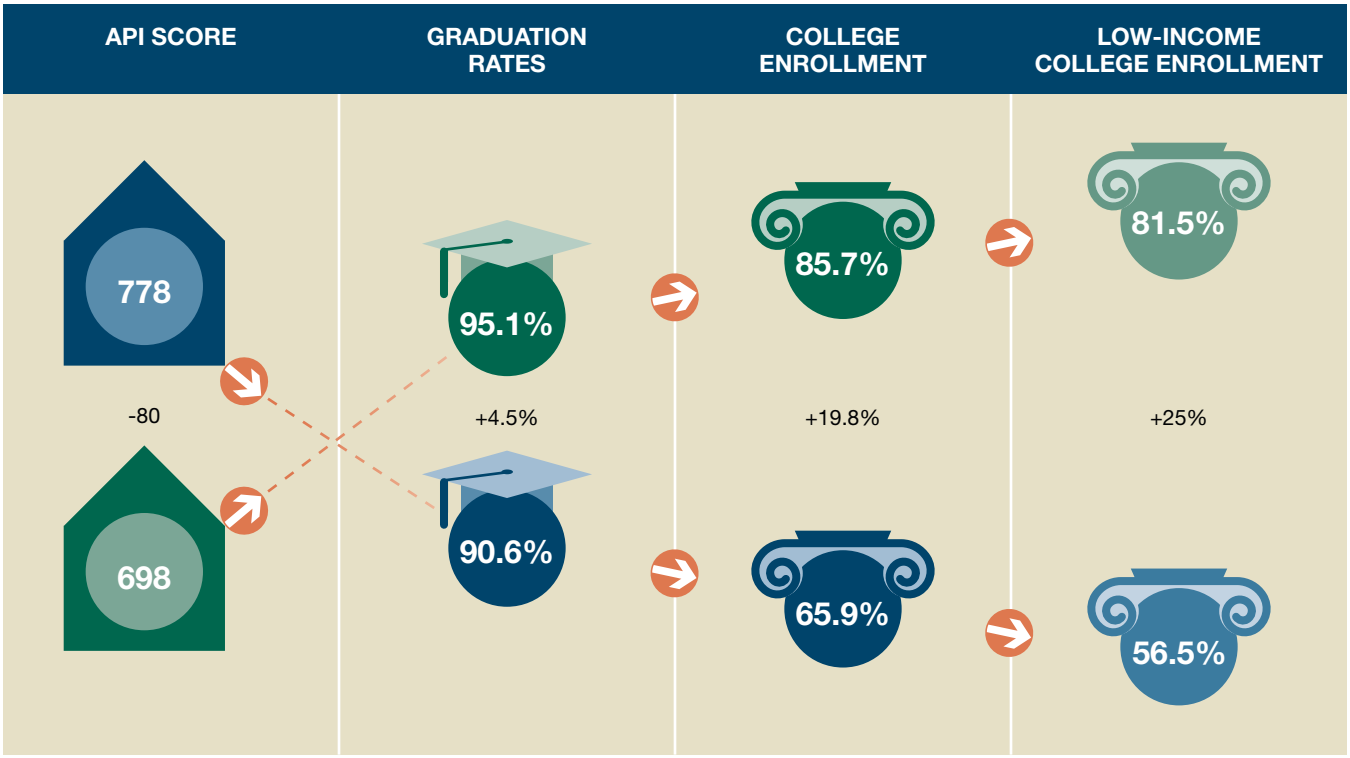
may be informative on one level—they tell parents, educators, and policymakers whether students have mastered the basic content—they were not designed to measure more advanced, college- and career-ready skills, and neither was the API.

Yet California does take several measures related to college and career readiness—data that have the potential to paint a clearer picture of achievement toward this all-important goal. One, a rigorous 11th grade exam that students volunteer to take, is the Early Assessment Program. Developed with the California State University (CSU) system, the EAP measures college readiness in English and math and is used by CSUs and many community colleges to exempt students from placement tests. Eighty percent of eligible California students participate in the EAP, but most (77 percent in English and 85 percent in math) do not test college ready.[7] In addition to the EAP, the CSU and the University of California (UC) have also defined a series of courses that high school students must complete to be eligible to enter public, four-year universities. The state collects data about students who pass all 15 of these "a-g" classes—a higher bar than the basic requirements to graduate. California also collects high school graduation rates, SAT and ACT scores, passage rates on Advanced Placement exams, and data on enrollment in postsecondary institutions. But none of these data are included in the API.

This is regrettable, because adding new pieces of data to the school accountability index could alter commonly held perceptions of school performance. Consider the case with the two similar high schools depicted in **Figure 1**.[8] While 698 is a much less impressive API score than 778, the school with the lower API score outperforms its peer high school in graduation rates, college enrollment, and college enrollment for low-income students—and the gap between the schools widens with each measure. Further evidence that a high schools' graduates were

Figure 1. Similar Schools, Different Outcomes

With more information—high school graduation, college enrollment, and enrollment for low-income students—a revised accountability system could alter current perceptions of school performance.



Source: California Department of Education.

Note: College enrollment rates include graduates that enrolled in public and private postsecondary institutions nationally within sixteen months of high school completion.

prepared, including data that show whether students directly entered college-level courses and persisted to a degree, are not now available. Despite that, the initial data provided in Figure 1 call into question whether the API on its own is sufficient to evaluate school performance.

The measures that policymakers choose to include in school accountability systems serve as important signals. To educators, students, and parents, they say "This is what matters." And because these metrics carry consequences, they give schools big incentives to change practice so they perform better on each. As Darrell Steinberg, California Senate President Pro Tem, has said, "What counts matters. What counts… determines the way courses are taught, the substance of the subject."[9] What counts right now in California is the API. And given that the API is based only on standardized tests, it is little wonder that schools focus most on those tested skills. That is what the system was designed to do. The problem is that the system is not meeting the needs of California students.

The Value of College and Career Readiness

Today's economy is a college economy. For students in California and elsewhere, some form of postsecondary education or training is more critical than ever to securing a well-paying job and supporting a family. Forty years ago, fewer than 30 percent of jobs required postsecondary training, and nearly 75 percent of Americans in the middle class had only a high school degree. The opposite is true today. Nearly 60 percent of jobs now require some college education, such as a certificate or an associate degree, and only about 40 percent of those with just a high school education earn enough to make it to the middle class. While earnings for high school graduates have increased 13 percent since 1983, they have increased even more—34 percent—for those with a bachelor's degree.[10] Recognizing higher education as a gateway to success for both individuals and the nation, President Obama has challenged Americans to lead the world in college completion by 2020.

But America will not get there if its students fail to meet the challenge of postsecondary work. And right now they are not. The numbers are grim: only 25 percent of high school students taking common college entrance exams are deemed college and career ready.[11] And two out of every five college students require remediation in basic skills—skills they should have mastered in high school—before they can enroll in credit-bearing courses.[12] Students consigned to these classes pay dearly, in time, tuition costs, and in a lower chance they will make it to a certificate or degree. Only half of students in remedial education even complete the courses necessary to move on to college-level work.[13]

Students are apparently no better prepared for the workforce. In an international survey of nearly 40,000 employers, 52 percent of U.S. employers said they had difficulty finding qualified applicants for open positions in 2011.[14] In particular, there is a skills gap between what employers expect and what recent graduates can do. If high schools only focus on teaching students basic knowledge and skills, graduates will lack the applied skills—like critical thinking, problem solving, oral and written communications, professionalism, teamwork, and collaboration—that employers say are most critical to success in the workplace.[15] Even students themselves realize they are unprepared. In a College Board survey of more than 1,500 high school graduates from 2010, two-thirds of students believed their high school should have done a better job preparing them for the workforce. These results were perhaps predictable, since among students who did not attend college, only a third were able to find a "good" job.[16]

Even students themselves realize they are unprepared.

Given the steep price of remediation and the large rewards for completing postsecondary training, high schools must extend their mission beyond simply getting their students a diploma; they must make sure those diplomas mean something.

Recognizing this need, 45 states and the District of Columbia have adopted common educational standards that are intentionally oriented toward that goal. More rigorous than most current state standards,

College AND Career Readiness

For decades, career and technical education (CTE) was seen as the less desirable, but still viable alternative to a college prep curriculum. Students who weren't going to college were tracked into vocational courses and prepared to enter the world of work immediately after high school. With a strong basic education and a set of employable skills, they could earn a decent wage and begin their climb toward the American Dream.

But the economy has changed. Today, high school diplomas are rarely enough for adequately paying careers. And almost all students headed to postsecondary education aspire to meaningful careers. It no longer makes sense to think in terms of either college or careers when students need both. Even during better economic times, the artificial bifurcation between college and career paths was problematic. It often led to lower expectations and fewer opportunities for career-track students, many of whom were there solely because of family income or the color of their skin.

Today, high schools must ensure that students are ready for both college and careers. But while preparedness in each is essential, the "both/and" strategy also poses challenges. As U.S. Secretary of Education Arne Duncan admits, "the truth is that most people—and I include myself here—have focused primarily on college readiness. Too often, career readiness is an afterthought."[1]

While it's true that college and career readiness "share a lot in common," says Gary Hoachlander, president of ConnectEd, the California Center for College and Career, "they are not the same."[2] Hoachlander describes career-ready students as those who've had "systemic, deep engagement with industry professionals around authentic applications." In other words, they're like the biology students who perform actual electrocardiograms as they learn about the role of electricity in regulating the human heart; they've engaged deeply with and applied academic understanding within a profession or workplace.[3] Ideally, college and career readiness are interlocked strategies, each supporting one another. Rather than detracting from high academic standards, strong career programs complement and enhance academic learning. And, instead of limiting a student's options, high quality CTE programs expand them, allowing students to "try on" a variety of career experiences.

States, including California, are also struggling to define appropriate measures of career readiness. One approach, embodied in SB 547, the proposed overhaul of the accountability system vetoed by Gov. Brown, is to create a separate "Career Readiness Index" that counts toward an overall accountability rating. The proposed index would include indicators such as course-taking, completion of career pathways, certificates, and other measures. While the creation of a separate index would ensure that schools and districts focus on CTE, it may also have the unintended effect of reinforcing CTE as separate from a college pathway.

A better approach would be to integrate CTE and college pathways, using enrollment and success in postsecondary education and training. As outcome measures, these would include vocational training, participation in apprenticeship programs, military enlistment, and attainment of professional licenses or certifications. This approach would align with promising approaches such as Linked Learning, a high school improvement program that preliminary research has shown to increase college enrollment rates by integrating rigorous academic preparation and career education along with work-based experiences.[4]

Notes

1 Remarks by U.S. Secretary of Education Arne Duncan, "Rigor, Relevance, and the Future of Career and Technical Education," April 19, 2011, http://www.ed.gov/news/speeches/rigor-relevance-and-future-career-and-technicaled-ucation (accessed October 25, 2011).

2 Gary Hoachlander, in discussion with authors, January 23, 2012.

3 See, for additional examples, Gary Hoachlander and Dave Yanofsky, *Making STEM Real* (Berkley, CA: Connect Ed, 2011) http://www.connectedcalifornia.org/downloads/MakingSTEMReal-EdLeadershipMagazine2011.pdf (accessed April 19, 2012).

4 See, *A Model for Success: CART's Linked Learning Program Increases College Enrollment* (Clovis, CA: The Center for Advanced Research and Technology, January 2011) http://irvine.org/images/stories/pdf/grantmaking/cart%20findings%20report%20final.pdf (accessed April 19, 2012).

the Common Core standards reflect the knowledge and skills that students need to graduate from high school "college- and career-ready." Their aim, as clearly specified in the standards, is for high school graduates "to be able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs."[17] That wording is significant.

American schools have traditionally operated under a dual system which put some students on a college track and others on a path headed directly for careers. But research supports twinning these goals—college *and* career readiness—because high school students looking to enter occupations that pay adequate salaries need the same level of academic preparation

Fulfilling a new mission—redesigning education around postsecondary success—will be challenging for California's high schools, but it is hardly impossible.

as those headed for college.[18] (See sidebar, "College AND Career Readiness," on page 5.)

Readiness for college—and for careers—is not exclusively a matter of proficiency in English, math, and science. High schools have properly emphasized the academics that will get students *into* college, but those students also need to know how to succeed once they get there. To thrive on campus, as well as in the workplace, students need skills to adapt and thrive in these new environments, including those that apply to persistence, time management, and interpersonal relationships. They also need the general savvy best described as "college knowledge," the ability to navigate the admissions process, the financial aid maze, and the dilemmas of course selection. Finally, they must have the maturity to handle school and work environments that are far less structured than those in which they have grown up. These coping skills are particularly important for California's most disadvantaged students.[19]

Fulfilling a new mission—redesigning education around postsecondary success—will be challenging for California's high schools, but it is hardly impossible. It will require an accountability system that works with, rather than against, a college- and career-ready agenda. And it must provide educators with timely, actionable information about how students fare after high school. If state policymakers do these two things, they can establish the conditions to make a whole host of other necessary changes possible, allowing educators to think differently about the purpose of high school, to use new diagnostic tools, and to make essential changes in curriculum and classroom practice.

Informing Our Understanding of School Performance

Although California has already adopted college- and career-ready standards and ways to measure them, it has not updated its accountability system or the API to reflect them. After the API was established in 1999, the system "got stuck in time," says California's Superintendent of Public Instruction Tom Torlakson.[20] Specifically, what factors into an API score may not necessarily calibrate well with the skills and knowledge students need today to succeed after high school.

California is not the only accountability system out of sync with the new readiness agenda, but the state lags behind in addressing the problem. The National Governors Association has suggested that states incorporate readiness measures into school accountability, such as Advanced Placement and International Baccalaureate exam scores, success in dual enrollment, completion of industry credentials, or even actual evidence of readiness—enrollment, remediation, and persistence in college.[21] Ten states, among the 19 recently given flexibility by the U.S. Department of Education to meet NCLB requirements, have proposed including readiness measures alongside traditional proficiency and achievement gap measures in their new accountability systems, and four states have already done so.[22]

Florida offers one model. Its schools are graded on an A–F scale, and since 2010, only half of the grade for high schools has been determined by state test scores. In addition, the state measures participation and successful completion of advanced coursework like AP, IB, and dual enrollment, and industry certifications and performance on college entrance exams. Together these indicators make up more than 30 percent of a high school's grade. Indiana, New Mexico, and Oklahoma have followed suit. Ten percent of Indiana's high school ratings stem from student success in AP and IB courses, dual enrollment, and industry certifications, and over time, more weight will be placed on these factors. Although these additional measures are only predictors of preparedness, they are more closely related to desired outcomes than state test scores alone.

Legislative Attempts to Redesign School Accountability

With California's adoption of the Common Core State standards in August 2010, State Senate Pro Tem Darrell Steinberg saw an opportunity. It was "to re-examine [the state's] system of public school accountability, the goals the state sets for its public schools, and the most appropriate methods for measuring progress toward those goals."[1] In other words, more rigorous academic standards help make the case to overhaul California's accountability system—the Academic Performance Index (API)—to better reflect the new standards and measure student preparation for college and careers.

In 2011, Steinberg introduced legislation, Senate Bill 547, to broaden the measures used to evaluate school performance beyond basic student proficiency in core subjects, particularly for high schools. As Steinberg and Superintendent of Public Instruction Tom Torlakson wrote in the *Sacramento Bee*: "Ask a baseball fan how good his team's shortstop is, and he can point to more than two dozen statistics, from the number of double plays turned to how often the player strikes out with runners on base. Ask about the performance of a public school in California, and you'll get one lonely number based solely on one set of end-of-the-year test results."[2]

Recognizing the limited information provided by the API, Steinberg's bill replaced it with something called the Education Quality Index (EQI)—itself a combination of four indices: a State Assessment Index, a Graduation Rate Index, a College Preparedness Index, and a Career Readiness Index. The State Assessment Index mirrored the current API, but could comprise no more than 40 percent of a high school's total EQI score. To specify the other measures and weighting in the new index, SB 547 tasked the superintendent of public instruction with convening a committee of experts and stakeholders to make recommendations to the Board of Education. While the College Preparedness and Career Readiness components must be weighted equally, SB 547 made suggestions only for the particular indicators to be included. This approach meant that college and career preparation would be considered separately, but that the two indices could include similar, or even the same, data. It is worth noting, however, that the suggested data points envisioned by the final legislation did not include information on postsecondary outcomes.

Despite strong majority votes for the measure in the State Assembly and Senate, as well as support from higher education, school administrators, charter schools, several school districts, and business groups, Gov. Brown vetoed SB 547 in October. He cited concerns with costs, the stability of the index over time, and particularly, the EQI's reliance on quantitative, standardized measures.

Brown's dislike of quantitative data was clear in his veto message: "Adding more speedometers to a broken car won't turn it into a high-performance machine."[3] Instead, Brown suggested more qualitative evaluations of school performance, such as inspections. Teachers and students could be observed and interviewed, and portfolios of student work could be examined, with determinations of school quality based, at least in part, on the professional judgment of the evaluators.

In light of the governor's veto message, Steinberg's latest proposal to revamp school accountability, Senate Bill 1458, is less specific and de-emphasizes the use of quantitative measures. The state superintendent, with state board approval, could add indicators of postsecondary readiness into the API, but the bill does not require a separate index for college or career preparation. Other changes specifically appeal to Brown: the new bill calls for streamlining testing requirements and limiting assessments to 40 percent of the API score for high schools. Finally, the superintendent, subject to board approval, would also be empowered to adopt school quality reviews by local evaluators alongside the API—*if* funding were made available.[4]

Whether Steinberg's revised legislation is successful or not, policymakers and stakeholders are becoming more aware of the API's shortcomings. And as the criticism grows, a more college- and career-oriented approach to accountability may become more palatable to skeptics, including Gov. Brown.

Notes

1 California Senate. 2011–2012 session. *An act to amend Section 52052.5 of, to amend and repeal Sections 52052 and 52052.1 of, and to add Sections 52052.8, 52052.81, 52052.82, 52052.83, and 52052.84 to, the Education Code, relating to school accountability, SB 547.* 2011. http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0501-0550/sb_547_bill_20110914_enrolled.pdf (accessed April 19, 2012).

2 Tom Torlakson and Darrell Steinberg, "Viewpoints: Bill would give schools a better scorecard," *The Sacramento Bee*, July 6, 2011, http://www.sacbee.com/2011/07/06/3749797/bill-would-give-schools-a-better.html (accessed April 19, 2012).

3 Governor Edmund G. Brown to the Members of the California State Senate, October 8, 2011, http://gov.ca.gov/docs/SB_547_Veto_Message.pdf (accessed April 26, 2012).

4 California Senate. 2011-2012 session. *An act to amend Section 52052 of, and to add Section 52052.9 to, the Education Code, relating to school accountability, SB 1458.* 2012. http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_1451-1500/sb_1458_bill_20120224_introduced.pdf (accessed April 19, 2012).

Accountability Affects Practice

In California, by contrast, there is still a big disconnect between what matters most for students and what matters for the API. And policymakers are beginning to recognize it. Last year, Steinberg introduced legislation to replace the API with a new measure of school performance that takes into account not only standardized test scores, but also graduation rates and measures of college and career readiness. (See sidebar, "Legislative Attempts to Redesign School Accountability," on page 7.) The API, says Steinberg, "has made our schools, too often, primarily focus on standardized tests instead of engaging [students] in a way that motivates toward graduation, higher learning, and careers."[23] Stressing measures of postsecondary readiness can reverse that focus, liberating educators to concentrate on what they and their students truly care about. Says Cheryl Hibbeln, principal of San Diego's Kearny High School of Digital Media and Design: "Schools that have potentially made curriculum decisions based on ensuring test success can give themselves permission to implement changes that will increase student engagement and accountability."[24]

Like it or not, test scores, not college and career outcomes, are the only accountability currency valued by the state.

Administrators at the June Jordan School for Equity in San Francisco, a 250-pupil school founded in 2003 to serve some of the city's poorest neighborhoods, are among those who feel pressure to increase test scores. The school's base API in 2010 was a dismal 568. But also that year, June Jordan ranked second among San Francisco high schools in the percentage of students eligible for the UC/CSU system, behind only the prestigious, admissions-based Lowell High School. Among its 2009 graduates, 70 percent enrolled in college overall, and 49 percent enrolled in four-year colleges—higher enrollment rates than the district average. The graduates are also persisting in college. Fully 100 percent of its 2007 graduates who entered two-year colleges re-enrolled for a second year, and 85 percent of its 2008 graduates did so.[25] For graduates entering four-year colleges, the figures are 100 percent for 2007 grads and 91 percent for 2008. Because of June Jordan's poor API score and its high proportion of low-income students (the second highest in the district), the school's postsecondary results are particularly notable.[26] Matt Alexander, co-director of the school, credits the school's focus on college preparedness, a "different goal [for] an educator," he says, than test score gains.[27]

At June Jordan, this means that college preparation is embedded in teaching and learning. The school adopted its own school-level accountability measures for students based on the kinds of assignments they are given in college, such as literary essays, class presentations, and lab reports. Professors from San Francisco State University worked with June Jordan faculty, examining students' essays and teachers' grading rubrics, to make sure the high school set the expectations bar at the right height—one that is aligned with college-level expectations. And to graduate, all students must present and defend a plan for what they want to do *after* graduation in front of school faculty and their parents. Despite the school's successes, low test scores remain a problem that cannot be overlooked. As Armon Kasmai, a humanities teacher, admits, "the quantitative evidence is creating a qualitative sense of failure."[28] Like it or not, test scores, not college and career outcomes, are the only accountability currency valued by the state.

A Flawed Measure of College and Career Readiness

Test scores may be the best way to answer a very specific kind of question, such as whether a school's students mastered grade-level math content. But when it comes to measuring progress toward the larger goal of postsecondary readiness, test scores in combination with direct evidence of readiness are a better choice than test scores alone.

The data picture painted by the two schools in Figure 1 shows that API scores do not necessarily reflect students' overall readiness for life after high school. Based on available data for one large, "typical" high

school and a small sample of 20 similar schools, **Figure 2** displays how the "best" and "worst" schools—according to the API—often move to a different performance quartile once college- and career-readiness data are compared instead.[29] If the five "worst" schools were consistently the lowest-performing, the bottom portion of the chart would not contain a single arrow. Instead, the five API schools in the lowest quartile all rise to the middle of the pack on at least one measure—and sometimes jump all the way to the top. The same is true for the high schools in the top quartile in our sample: in seven cases, four of the five schools would be placed in the lowest-performing group based on postsecondary readiness data.

FIGURE 2. Best, worst, or somewhere in the middle?

Judgments of school performance change when indicators and evidence of college readiness are considered.

	BASE API SCORE	GRADUATION RATE	AP SUCCESS RATE	SAT SCORES	EAP: COLLEGE READY IN ENGLISH	EAP: COLLEGE READY IN MATH	GRADUATES COMPLETING A-G COURSES	COLLEGE ENROLLMENT RATE	LOW-INCOME COLLEGE ENROLLMENT RATE
HIGHEST QUARTILE	778	↓	—	—		↓	↓	↓	↓
	777	↓	↓	—		↓	↓	↓	↓
	763		—						
	757					↓	↓	↓	↓
	757	↓	↓	↓		↓	↓	↓	↓
MIDDLE QUARTILES	750								
	748								
	748		—						
	734							—	—
	734								
	732								
	731				—	—	—	—	—
	729								
	727								
	718								
	713								
LOWEST QUARTILE	698		↑	↑	↑	↑	↑		
	698	↑	↑	↑			↑	↑	↑
	693	↑			↑			—	—
	687	↑				↑	↑		
	653		—	—	—	—			↑

Sources: Ed-Data (a partnership of CDE, EdSource, and FCMAT), the California State University, and the California Department of Education.
Note: The arrows demonstrate how a high school's relative performance changes when indicators of postsecondary readiness are considered rather than API scores. Small arrows designate a high school where its relative performance moved toward the median on a measure of readiness. Large arrows designate a high school where its relative standing moved from one extreme of the interquartile range to the other. A dash indicates the high school was missing data.

Comparing variation in standardized test scores across the range of API scores with variation in postsecondary enrollment rates provides further evidence that the API does not always align with students' postsecondary outcomes. The two comparisons on the left in **Figure 3** clearly demonstrate that "better" schools, with high API scores, also tend to have a higher percentage of students passing the CAHSEE in 10th grade. This finding is not a surprise. The CAHSEE is one of the two tests used in the API. And this finding wouldn't be a problem if basic proficiency in math and reading was the outcome schools were striving for. But the goal is college and career readiness.

The two comparisons on the right in Figure 3 show the relationship between college enrollment and API scores. In the sample of "typical" schools in the top right, there is a positive relationship between API and postsecondary enrollment. In other words, most high-scoring API schools also tend to have higher postsecondary enrollment and most low-scoring API schools have lower postsecondary enrollment. But in the sample of high-poverty schools, the relationship between high API scores and high college enrollment rates all but disappears.[30]

Schools that the API deems "failures" are not always failing across the board. Because there does not appear to be a strong link between postsecondary enrollment and API scores in high-poverty high schools, these schools could gain even more from measuring postsecondary outcomes than the average school, especially since high-poverty schools also tend to receive lower API scores than their more affluent peers. Although further analysis with additional measures like remediation rates is needed to determine precisely how well students are prepared, California's current school accountability system fails to recognize students' postsecondary outcomes, especially when these outcomes do not align with a school's API score.

Among the high-poverty schools, three of the five high schools with the lowest API scores in the sample are among the top five in terms of sending their graduates to college.

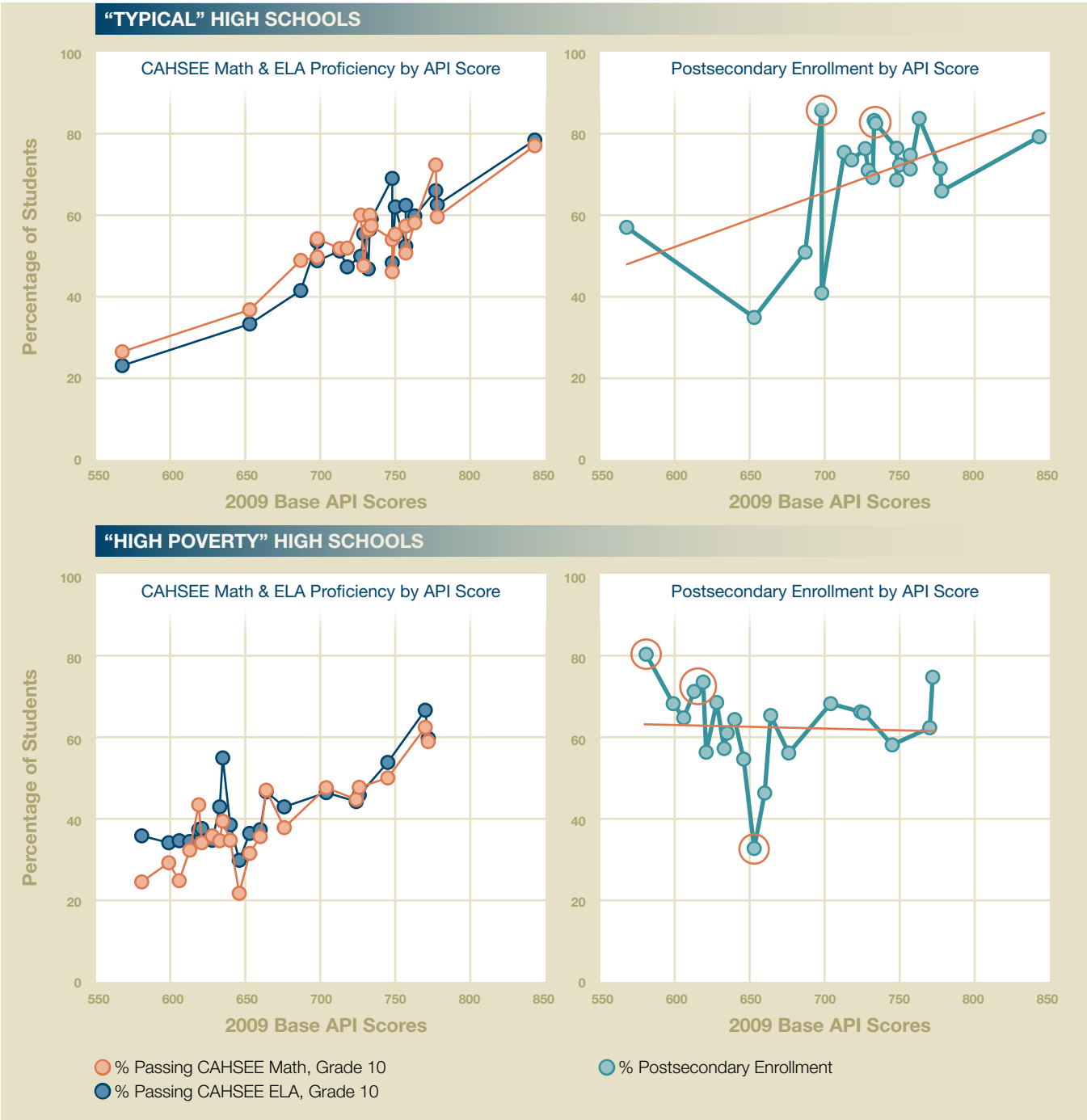
Some schools that appear to be middling as a result of their API score may in fact do exceptionally well when it comes to ensuring their graduates enter postsecondary education.

Some of these outliers are highlighted in Figure 3. Among the high-poverty schools, three of the five high schools with the lowest API scores in the sample are among the top five in terms of sending their graduates to college, and the school with the lowest API score (581) had the highest postsecondary enrollment rate: 79 percent of its 2009 graduates went on to a postsecondary institution, 5 percentage points above the state average. And one school in the middle of the pack on API scores (653) only sent one-third of its graduates to college, far below the sample average. And even though the API is more closely related to postsecondary enrollment in "typical" schools, there are still exceptions to the rule.

Some schools that appear to be middling as a result of their API score may in fact do exceptionally well when it comes to ensuring their graduates enter postsecondary education. Over 80 percent of students enrolled in college from the high school with the median API score (733), the third-highest percentage of any school in the sample. Even more striking, one high school in the bottom quartile of the sample (as defined by the API) led the pack in terms of the proportion of its students who enrolled in college. Expanding accountability to include postsecondary outcomes helps shine a light on these exceptions to the rule. These additional pieces of data could provide a more holistic measure of school performance based on student achievement, graduation rates, and postsecondary measures and identify promising approaches that could be used statewide.

FIGURE 3. Postsecondary Outcomes in 'Typical' and 'High-Poverty' Schools

In a sample of "typical" California high schools, better API scores are indicative of higher student proficiency in basic reading and math, and are a fairly good proxy for college enrollment, with some exceptions. But in a sample of high-poverty high schools, the link between the API and college enrollment disappears. For schools with more disadvantaged students, perceptions of school quality based on API scores are less likely to capture postsecondary outcomes.



Sources: Ed-Data (a partnership of CDE, EdSource, and FCMAT) and the California Department of Education.

Note: One high school and 20 similar schools were compared in each sample. On the left, data points plot the percentage of students passing the CAHSEE in math or English Language Arts in 10th Grade by high school base API score. On the right, data points plot the percentage of graduates enrolling in postsecondary institutions by high school base API score. The line indicates the correlation between the 2009 Base API and postsecondary enrollment rates. Outlier high schools are circled.

A New API: The Almost Perfect Index

While redesigning the API to include readiness metrics seems like a sensible move, it is not without complications. As Figure 1 shows, California's existing data are mostly *indicators* of readiness rather than *evidence* of readiness. The distinction is an important one. An *indicator* of readiness would be, for instance, success on an AP exam. Since the exam score is collected while the student is still in high school, it is only a predictor of whether a student will actually succeed once he graduates. *Evidence* of readiness is something like whether students enroll in postsecondary education ready for college-level work and go on to complete their degree or certificate; it's data taken *after* the student leaves high school that measures whether a student was actually prepared.[31]

There are other problems with California's existing indicators of readiness. Unlike student participation in the STAR and CAHSEE tests, participation in these existing tests of readiness is voluntary. Students who opt to take AP classes or the EAP exam may not be representative of their high school as a whole. Moreover, the availability of accelerated courses may be more a function of a school's resources than its quality of instruction. Increasing the emphasis on the EAP and AP exams through inclusion in the API may give wealthier schools an advantage. Another negative consequence could be that schools would discourage some students from taking the exams, hoping for higher pass rates and the rewards that come with them. According to a recent report from The Education Trust-West, Latino and African-American students are already far less likely to take and succeed in a-g courses than White or Asian students.[32] But if the API used rates for both participation *and* success, it would mitigate the risk that even more students would be tracked out of rigorous courses. It could even increase overall participation and success in college-level work.

Every school wants more students earning high AP scores, testing "ready" on the EAP, or completing the a-g sequence. But, again, these indicators are only proxies for preparedness. What educators really want is for students to succeed *once they leave high school*. That is why measuring postsecondary outcomes—true *evidence* of readiness—is so critical. Here again, California's data are lacking.

Postsecondary enrollment data are available, but limited. The fact that a student enrolled in college doesn't necessarily mean he was ready for the work when he got there. But adding information about remediation rates, persistence rates, credit accumulation, degree completion, and other data, clarifies the preparation picture. This kind of evidence is reported by colleges voluntarily, however, so even when it's available, it's often incomplete and unreliable.[33]

Even if robust college- and career-outcome data were available in California, policymakers should carefully consider whether it is appropriate to include all of the data in a revised API or accountability system. That's because many of these outcomes reflect not only the quality of the high school but also that of the postsecondary institution. In general, the shorter the period of time between any specific outcome and high school graduation, the more closely the outcome is related to the performance of the high school. Thus, some evidence of college readiness—like college enrollment and remediation rates—may be more appropriate to include in an accountability system than data on persistence or degree completion. District officials and educators are likely interested in these latter outcomes, but they would understandably resist efforts to include them in an accountability system.

Likewise, remediation rates are a reflection not only of high school preparation, but of the placement policies of individual colleges—policies that are hardly uniform, fair, or transparent. Remediation is too often where college students start and stop.[34] Including college remediation rates in high school accountability measures could help break that pattern. Giving teachers and administrators a bigger stake in the college remediation process might very well encourage better collaboration between K–12 and higher education, improving upon the inconsistent, inefficient remediation policies that currently ill-serve students.

At the same time, students can only succeed *after* high school once they have graduated from high school. So high school graduation rates should also be considered in a revised API. Without the graduation component, an outcomes-based accountability index could unintentionally encourage schools to neglect students who are struggling just to complete high

school, exacerbating dropout rates and pushing those students most in need out of the education pipeline altogether. In short, accountability systems should be designed to encourage and reward schools that simultaneously raise graduation rates *and* readiness rates, rather than focus on one or the other.[35]

Finally, what about students who do *not* enroll in college? When schools are also trying to prepare students for careers right after high school, enrollment and persistence in an institution of higher education cannot be considered the only successful outcome. Yet most states, including California, have no way to follow high school students who choose other paths—who enlist in the military, for instance, or who directly enter the workforce. If a new accountability system ignores these other pathways, it runs the risk of implicitly promoting a "college for all" agenda. An index should also measure completion of vocational or apprenticeship programs, military enlistment, and attainment of professional licenses and certifications. By including data on these non-college outcomes, policymakers are acknowledging the importance of postsecondary training without requiring that it come in the form of a degree.

Given the complications, adding measures of college and career readiness to California's accountability system is unlikely to make the API a perfect measure of school quality. But it would make it a better one. As it is, the API does not value college and career readiness at all. Making a transition to an index that incorporates at least some measures of readiness would relieve the pressure on educators to teach to the test, and it would give schools incentives to better equip students for what comes next. It would still not be a perfect index, but an outcomes-oriented API would at least measure and reinforce what's most important: graduating students from high school with the knowledge and skills to succeed in higher education and a career.

Accountability Is Not Enough

Still, improved accountability measures are only a start. Educators also need the capacity—the tools, the time, the support—to act on what those measures teach them. The majority of districts in California don't have that capacity, although some districts, like Long Beach and Fresno Unified School Districts,

'The Long Beach Way'

Long Beach Unified School District (LBUSD), California's third largest, has long been viewed as an exemplar for its efforts to improve students' postsecondary success. The winner of the prestigious Broad Prize for Urban Education in 2003, the 83,000-student district was far ahead of the curve when it came to aligning programs with college- and career-ready expectations. As far back as 1994, the district partnered with Long Beach City College and CSU Long Beach to form an educational partnership aimed at improving postsecondary success and creating a seamless transition from K–12 to college. As U.S. Secretary of Education Arne Duncan said in a trip to the district last year, "I don't say this lightly, but more so than the vast majority of school districts that I visit, this school district has gotten things right for a long time."[1]

Through the partnership, known as the Long Beach College Promise, the district and its partners in higher education have worked to break down arbitrary barriers between the two systems. Since its inception, leadership and communication have been key. While most districts see a new leader every three or four years, LBUSD has only had two in the last 20: Carl Cohn and Chris Steinhauser, who has served as superintendent since 2002. This extraordinary stability has sustained personal relationships that have enabled the College Promise to grow and evolve—and created a culture that expects collaboration and a focus on student outcomes at all levels.

This collaboration is evident in the relationships between high school and postsecondary educators. Teachers at LBUSD began to talk regularly with their counterparts in higher education to align academic standards, student assessment, and teaching. This sharing, in turn, built a level of respect and camaraderie. For example, CSU Long Beach taps teachers and administrators from LBUSD and City College to serve as Distinguished Faculty in Residence. And LBUSD has helped shape the teacher preparation program at CSU Long Beach. LBUSD educators comprise about half of the faculty who teach methods courses in the university's teacher preparation program. Seventy five percent of LBUSD teachers come from CSU Long Beach, and this kind of coordination, says Steinhauser, ensures that "teacher candidates are already getting the Long Beach way when they are at the university."[2]

Long Beach has relied on data at all levels for guidance in improving college and career readiness. Steinhauser says Long Beach views itself "as a continuous improvement district. We look at the data every year,

(continues next page)

continued, 'The Long Beach Way'

target certain issues and build upon those issues."[3] To get the data it needs, the district has leveraged funding to create its own web-based data system outside of the state's CALPADS system. Whereas CALPADS is more compliance-oriented and "[less of] an open, interactive system," the system built by Long Beach is designed for teachers and principals, who can access individual student profiles with test scores from previous years, results of formative assessments, and discipline and attendance records.[4] The district then shares data with City College and CSU Long Beach, so that LBUSD can track its students after graduation.

Long Beach has also embedded college preparation into its academic program. While the district aligned its standards, curriculum, and assessments with college standards in the 1990s, it has recently adopted novel approaches for increasing access to higher education. Starting in middle school, the district reaches out to families and students to build awareness of California's college entrance requirements. LBUSD was also the first school district in the state to require its students to take the EAP exam. Students who score "not ready" take remedial courses during their senior year of high school, rather than waiting to take them in college.[5] Due in part to the strong relationship between the district and its higher education partners, EAP results are accepted at City College in lieu of traditional placement exams. LBUSD students are also given preference at partner institutions. There is guaranteed admission to CSU Long Beach for students who meet the minimum eligibility requirements, and all LBUSD students are eligible for one semester free-of-charge at Long Beach City College. Plus, Gov. Brown recently signed a bill allowing for City College to grant priority registration status to LBUSD students.[6]

The College Promise is starting to pay off. Seventy-four percent of Long Beach students enroll in higher education within one year of graduating—and half of them enroll at either Long Beach City College or CSU Long Beach. Last year, 729 Long Beach graduates enrolled in CSU Long Beach, a 40 percent increase from 2008. Additionally, EAP results in the district have continued to improve, even as more students are taking the exam. By replacing traditional placement exams with the EAP, the remediation rates of LBUSD students at City College has decreased, and former Long Beach students there are more likely to persist in community college and more likely to transfer to and stay at CSU Long Beach than students from other districts.

Not every district in California has the advantage of Long Beach's size, resources, or stable leadership, but many of the policies, choices, and attitudes that have made the College Promise a success could be adopted in other districts. While results may not be immediate—it took Long Beach 20 years to get to this point – the Long Beach Way should be considered as a strong model for other districts to follow.

Notes

1 Long Beach Unified School District, "U.S. Education Secretary Lauds LBUSD," March 30, 2011, http://www.lbschools.net/Main_Offices/Superintendent/Public_Information/Newsroom/articleDetails_NEW.cfm?articleID=1352 (accessed May 1, 2012).

2 Anne O'Brien, "'The Long Beach Way': A Conversation with Long Beach Superintendent Chris Steinhauser," Learning First Alliance, January 15, 2010, http://www.learningfirst.org/visionaries/Steinhauser (accessed May 1, 2012).

3 Anne O'Brien, "'The Long Beach Way': A Conversation with Long Beach Superintendent Chris Steinhauser."

4 John Fensterwald, "Districts show the way in using data: Texas' new system offers hope to California," Silicon Valley Education Foundation, October 20, 2010, http://toped.svefoundation.org/2010/10/20/look-to-districts-for-innovative-data-use/ (accessed April 30, 2012).

5 Policy Analysis for California Education, *California's Early Assessment Program: Its Effectiveness and the Obstacles to Successful Program Implementation* (Stanford, CA: Stanford University, March 2012) http://www.stanford.edu/group/pace/PUBLICATIONS/PACE_EAP_March_2012.pdf (accessed April 19, 2012).

6 "Governor Brown Signs 'Long Beach College Promise Act,'" *Long Beach Post,* October 10, 2011, http://www.lbpost.com/news/staffreports/12527 (accessed May 1, 2012).

are more advanced.[36] (See sidebar, "The Long Beach Way," on page 13.) Moreover, most students move among school districts, and many attend more than one postsecondary institution. Only the state has the capability to capture information about these mobile students, allowing districts to make comparisons and improve practice. And given their common need, it would be unwise and inefficient to rely on each school district to build their own data systems, tools, and procedures to collect and report data.[37] Yet California has left its 400-plus high school and unified districts largely on their own.

Last summer, Gov. Jerry Brown, saying he was concerned about overuse of test data and believed that individual school districts should keep track of their own students, threatened to veto funding for the state's main system for tracking individual students across grades and schools.[38] Although he eventually restored funding for the system, known as

the California Longitudinal Pupil Achievement Data System, or CALPADS, he disbanded the agency that maintained records from the state's community and four-year colleges that showed where each high school's graduates had enrolled. The data are still available under a temporary arrangement, but legislative analysts have detailed serious concerns about how long it will last and how accessible it is.[39] The state has also failed to seek a federal grant that would support linking K–12, postsecondary, and workforce data. It declined to take advantage of this funding opportunity despite enabling legislation and support from influential organizations such as the Association of California School Administrators, the California State PTA, and the Los Angeles Area Chamber of Commerce.[40]

Outcomes data on students who graduated six years ago may be interesting to a principal, but it is less relevant to current practice than a report on students who graduated just one or two years ago.

In connecting data use with an increase in high-stakes testing, Brown shared a concern of many educators. But in San Diego, at least, better information has led to the opposite result. After working with educators at West Hills High School to align the school's coursework with college requirements, the English department chair of Grossmont College evaluated writing samples from West Hills students. Satisfied with the content and rigor of the West Hills courses, Grossmont and another local community college, Cuyamaca, now trust the judgment of their feeder high school. Students who receive an A or B in senior English classes are placed directly into a college-level course. And, because the community colleges have data, they have evidence that those placements were appropriate: 86 percent of the West Hills students who were allowed to bypass the placement exam successfully completed the college-level course.[41]

Better Data Are Useful Data

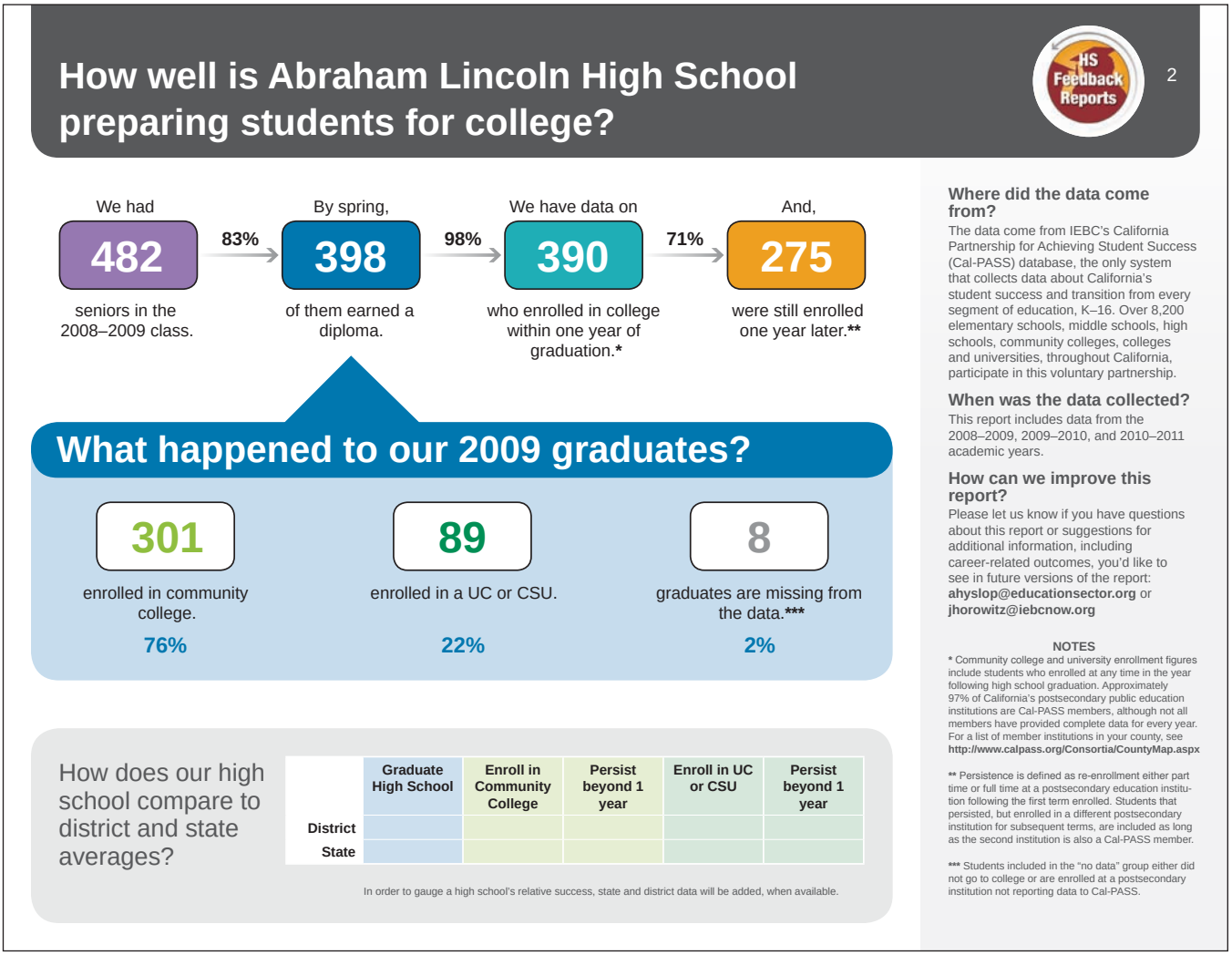
To be useful, data must be thorough and accurate. And, it must inform the actual day-to-day practices of educators. When CALPADS was created a decade ago, its scope was limited to compliance with NCLB, which relies largely on state-level standardized tests to make determinations about school performance. CALPADS is not, says L. Russ Brawn, chief operating officer for California School Information Services, a system "that's designed to help local education deal with the daily learning of their students."[42]

Under ideal circumstances, high school educators would see feedback on their students who attend not only state colleges and universities, but also private and out-of-state schools. And they would get the information soon enough and often enough to act on it. Outcomes data on students who graduated six years ago may be interesting to a principal, but it is less relevant to current practice than a report on students who graduated just one or two years ago. In six years, the high school might have changed its curriculum, hired a new principal, or restructured its schedule. It makes more sense for states to provide feedback within one or two years, and then update it as the cohort of graduates progresses through college or the military or workforce training. And rather than burying the data in illegible spreadsheets or 100-page-long documents, reports should be easy to read, explicitly comparing schools to similar institutions or to a state average. **Figure 4** provides one model for a California high school feedback report that incorporates these characteristics.

The more user-friendly data are, the more likely educators are to use them to improve instruction. These educators need a culture and an operational structure that values their collaboration—with each other and with colleagues in higher education—based on the data. Just as in San Diego, there is often a misalignment between educators' perceptions of students' college readiness. According to a 2006 study, 10 percent of high school faculty believed their students were not ready for college writing, compared to 44 percent of college faculty.[43] Teachers must be encouraged to share data and talk about what they think it means.

Beyond improving instruction, when data get used, they get better; the frequent, front-line use of

FIGURE 4. Sample Feedback Report for Fictional High School



data by educators prevents and corrects errors.[44] Finally, educators should appreciate that using data take time. It is most powerful when, as in San Diego, it's used as a catalyst for long-term change. Research shows that even in the most sophisticated organizations, the effective use of data is an iterative process—a continuous cycle of research and discovery. Research also shows that once people start using data effectively, they become more sophisticated and discriminating; they demand data that are increasingly timely, relevant, and specific.[45]

Barriers to Change

Too often, educators are wary of data and accountability. That's mostly because these kinds of measures are punitive. "[They are] used as a hammer to punish," says the Data Quality Campaign, "rather than a flashlight to illuminate and inform continuous improvement."[46] But the issue here is not more scores from yet another standardized test of basic skills. The issue is providing data—quantitative and qualitative information about how students fare after high school—that teachers and principals actually *want*. And because these educators care about their students' long-term success, an outcomes-oriented approach to accountability trusts and encourages them to make decisions with this long-term view at the fore.

With the lack of information on high school graduates' postsecondary outcomes from the state, schools are finding it elsewhere. Some have partnered with community organizations and nonprofits to get the

data they need. Beyond 12, based in San Francisco, is one organization filling the void. Instead of the aggregate data most often available, Beyond 12 provides individual, student-specific feedback to high schools. Its Alumni Tracker utilizes new technology and social media, through Sales Force, Facebook, and text messaging, to collect quantitative and qualitative information from former students. According to Alex Bernadotte, Beyond 12's founder and CEO, this "individual student data is the path to changing action and behavior" because it makes the data personal.[47] For example, the knowledge of how many students, in the aggregate, enroll in remedial math courses becomes even more powerful for teachers when they also learn that one of those students was the class salutatorian—a student they believed was bound to thrive in college.

But making the structural changes to accommodate this new approach—like getting better data and adjusting accountability systems—is the easy part. Building strong leadership and changing school culture and behavior to promote postsecondary readiness is much harder. Once principals and teachers find out that their graduates are struggling after high school, they need the determination and the know-how to take action. Why are their graduates having trouble? At West Hills High, the problem was a misalignment in one particular subject between high school and college. But a rigorous academic background isn't the only thing students need to succeed. They also need coping skills, strategies to think through complex problems, time management and effective study habits, and the practical smarts known as college knowledge—how to access financial aid, counseling, and other services.[48] High schools must foster all these dimensions of readiness. Says John Deasy, superintendent of Los Angeles Unified School District: "It was heartbreaking when we learned that even our best-prepared students were dropping out for financial aid reasons. That information prompted me and my staff to focus on financial aid training, to supplement all the gains we were making in academic rigor."[49]

Teaching such non-academic fare is challenging, unfamiliar work for many high schools, especially those that serve disadvantaged or first-generation students, many of whom lack the social networks that other students rely on to learn the ropes of college. For help,

Once principals and teachers find out that their graduates are struggling after high school, they need the determination and the know-how to take action.

some schools have turned to outside networks. In addition to providing high schools with data, Beyond 12 provides traditionally underserved students with coaches to help smooth their transition from senior year of high school through sophomore year of college. While the coaches provide academic support, they also support the social and emotional well-being of these students, who tend to feel disengaged and lost in higher education. Other schools, like June Jordan, try to build these skills in their graduates up-front. Through a partnership with College Summit, another nonprofit, the school trains peer leaders to promote a college-going culture at the school. The peer leaders do everything from organizing workshops on financial aid to starting informal, hallway conversations about college. Leslie Hsu, the College Access Director at June Jordan, says that the formal and informal college readiness programs "infuse these ideas *all* the time" in their students. Hsu also encourages her students—who often lack "embedded college knowledge"—to take ownership of the college process so that they know what to do once they get there.[50] For instance, Hsu will coach students through the questions they should ask financial aid officers, but won't make the call for them, even if the student has to call three times to get the information they need.

Reorienting California's education system around college and career readiness requires leadership not only from school leaders, but also from the state. The veto threat of CALPADS was not the only way the state failed to provide it. Brown also vetoed state funding for a database with the capacity to link teacher and student information. By pulling $2 million from the database, known as CALTIDES, Brown gave up an additional $4 million in federal funding.[51] And again, despite passing the State Assembly and Senate, Brown vetoed the legislation to include college- and career-readiness measures in the API. In that veto message, Brown said the bill would

have added significant costs and confusion to the implementation of the newly adopted Common Core standards. "This bill would require us to introduce a whole new system of accountability at the same time we are required to carry out extensive revisions to school curriculum, teaching materials, and tests," Brown said. "That doesn't make sense."

In fact, what doesn't make sense is implementing new standards, tests, and curriculum that are aligned with college and career readiness while continuing to evaluate school performance based on an entirely different goal. More important, Brown's continued opposition to CALPADS, his refusal to apply for federal funds to improve the state's data collection, and his veto of the API redesign, only serve to maintain the very status quo that he repeatedly condemns.

The governor's concerns about costs are understandable and justified: the state faces a $16 billion shortfall for the 2012–13 fiscal year. To help close it, and primarily to fulfill the state's financial commitment to education, Brown is promoting a November 2012 ballot initiative to increase taxes. If voters reject the tax increase, trigger cuts of $5.5 billion for K–14 education will be enacted.[52]

Given this gloomy financial picture, it is incredibly difficult for other political leaders and educators to focus on much else. Yet California's financial crisis should not serve as an excuse to block needed reform. Many of the pieces needed to redesign California's data and accountability systems are already in place, and much of the hard work of building CALPADS is done. In August 2011, the state was able to report accurate graduation and dropout rates for the first time.[53] And in October, the state reported the percentage of California high school graduates enrolling in both in-state and out-of-state postsecondary institutions—another first.[54] Although connecting CALPADS to postsecondary data remains a challenge, other organizations are collecting postsecondary data and have the ability to link it to high schools. For over 10 years, Cal-PASS—the California Partnership for Achieving Student Success—has kept records of students' high school and college transcripts. Because participation in Cal-PASS is voluntary, it has limited usefulness as a statewide tool. But, says education journalist John Fensterwald, Cal-PASS is "providing data that classroom educators and administrators up and down public education systems can use to answer questions and solve problems."[55]

Likewise, the API fails to tap into what the state already collects. Without spending any more money on data collection, California could redesign the API to include better indicators of college and career readiness like graduation rates, SAT and ACT scores, participation in and success on AP exams, a-g course completion rates, EAP results, or enrollment in postsecondary institutions. These data, many of which can also be broken down by student demographic groups, could be used initially to gauge readiness, and more sophisticated measures could be added later.

Without spending any more money on data collection, California could redesign the API to include better indicators of college and career readiness.

Building on an Existing Foundation

California's education system used to be a model for other states—even the world. Its academic standards are consistently rated as some of the best in the nation, superior or on par with the new Common Core standards.[56] But strong academic standards are not enough. California's assessments and its current school accountability system are not designed to ensure those standards are met or to equip those standards to drive student achievement.[57] And the outstanding higher education system created by its renowned 1960 Master Plan is now plagued with budget cuts, enrollment caps, and unsustainable tuition increases. An education system once the envy of the world is becoming an example of what not to do.[58]

While California's educational trajectory may appear headed toward self-destruction, the state is not without tools to tackle the problem. The ideas

advanced by this paper, critical to ensuring that California students can fulfill their post-high school dreams, are neither new nor novel. Almost a decade ago, a group of researchers at Stanford University, led by Michael Kirst, the current president of the California State Board of Education, documented gaping disconnects between high school and college, misaligned coursework, a lack of cross-system data, and an absence of accountability for smoothing transitions to college. In their final report for the Bridge Project, a six-year national study that examined how states were working to span the continuum from kindergarten through postsecondary education, the researchers noted that "traditionally, what has been valued in American education is participation in the system for as long as possible…. K–12 education systems focused more, therefore, on keeping students in high school, and on providing opportunities for them to graduate, than on what they should know and be able to do to succeed in postsecondary education."[59]

The Bridge Project sparked a renewed focus on students' successful transitions from high school to postsecondary, including the completion of CALPADS and unprecedented access to critical data, like graduation and dropout rates. Now, California has a unique opportunity to continue to redirect its system toward the goal that matters most. Building on its already strong standards, the state's adoption of the Common Core will ensure an exceptional focus on college readiness, including strong alignment and partnerships with postsecondary institutions. In the 2014–15 school year, along with two dozen other states in the Smarter Balanced Assessment Consortium, the state will also implement a new assessment system, replacing its current tests with higher quality assessments that go beyond bubble-filling to test more complex learning outcomes. If implemented well, the new standards and assessments will help to bridge the curricular chasm between high school and college.

The time is also ripe for a change in the state's accountability and data systems. Last year a diverse coalition of organizations advocated for implementation of a plan arising out of legislation that would not only link K–12 and postsecondary education data, but also initiate research, reports, and training on effective use of these data.[60] And

Better data and accountability systems will not improve classroom teaching and learning on their own.

the school accountability system's limitations are becoming well-known, with support growing for change—albeit without consensus about what particular changes are needed. Although California has submitted a waiver request to the U.S. Department of Education to use the API instead of federal accountability measures, the state did not use the opportunity to update the index. To justify replacing adequate yearly progress with the API, Kirst argued, "Our system is better than NCLB at identifying which schools need help."[61] But the system could be even better by valuing college and career readiness more explicitly.

Better data and accountability systems will not improve classroom teaching and learning on their own. It will take talented teachers, effective guidance counselors, and an array of other supports to make sure that students succeed in their endeavors after high school. When given the opportunity and the tools, as West Hills, June Jordan, and Long Beach Unified have shown, creative educators can begin to solve these challenges. The foundation for a new educational system oriented toward success after high school is already there. Now, state legislators, district officials, educators, and parents need to recognize that strength and build on it.

Recommendations

By adopting the Common Core State Standards and assessments, California's education leaders have a window of opportunity to build the political will necessary to link K–12 and higher education around the goal of college and career readiness. To take advantage of this window, **the single most significant action the state can take would be to align performance standards on the EAP—and the forthcoming Common Core assessments—with postsecondary remedial placement policies.**

While the Early Assessment Program, a rigorous 11th grade exam that students volunteer to take, has been touted as a model for those developing Common Core assessments, its respect outshines its influence. The EAP is underutilized in both secondary and postsecondary education, and California's students, high school educators, and higher education faculty have disconnected notions of what it means to be college-ready. High schools offer the EAP exam, but not the coursework to help students deemed "not ready." The University of California does not accept EAP results, and the same holds for nearly half of community colleges.[1] In short, the EAP is not living up to its promise to reduce the number of students underprepared for college-level work. By adopting a common standard for readiness across California's community college, California State University, and University of California systems, students meeting the readiness standard could be assured automatic placement into credit-bearing courses. With the EAP infrastructure already in place, adopting a universal college-readiness standard is a bargain—in fact, it would likely save money overall due to reduced placement testing and developmental education at the postsecondary level. Most important, a universal standard would eliminate much of the readiness disconnect between high school and higher education.

Creating a universal standard of college readiness based on the EAP and Common Core assessments is not the only solution—particularly since students need to be both college *and career* ready. These tests only measure academic preparation in two subjects and not the full range of what is needed for success in college or the workplace. Further, test results are indicators, and not actual evidence, of whether students were ready. But, a common standard of college readiness based on existing assessments is a logical first step, and the subsequent recommendations build from it. California must also:

Ensure that educators have access to useful and timely information about students' postsecondary outcomes

- Educators' need for useful, actionable information should be a priority in any state- or district-level data initiatives. These data should be:
  - Transparent. Data should be open and accessible to principals, state and district officials, and the general public.
  - Thorough. Reports should include multiple measures from all high schools in the state, and from all graduating classes.
  - Timely. Information needs to be received quickly enough for schools to make needed changes.
  - Tailored. Reports should be thoughtfully designed for educators and explicitly compare schools to similar institutions or to a state average. The more user-friendly data are, the more likely they will be tapped to improve instruction.
- While educators must have the capacity to understand and act on these data locally, the collection and dissemination of college- and career-outcome data is a state-level function.
- The state already has a detailed plan to better link K–12 with postsecondary and workforce data. This plan, developed by a diverse group of stakeholders under the auspices of SB 1298 and SB 19, would centralize the state's public preschool–12 and public postsecondary educational data at one single secure location and provide useful reporting and training for the use of these data. The state should pursue federal funding for this plan.
- Schools, districts, and the state should build on a decade's worth of knowledge, capabilities, and best practices developed through Cal-PASS, a voluntary collaborative that shares data and increases capacity of local educators to use data to improve student outcomes.

Incorporate indicators and evidence of postsecondary readiness into the accountability system

- California should follow the lead of Florida and a number of other states by incorporating indicators of postsecondary readiness into its accountability system. The state already collects a variety of school-level data, such as a-g, Advanced Placement, dual-enrollment course participation and completion, and Early Assessment Program testing. Indicators should reflect rates for both participation and success, particularly for low-income and disadvantaged students.
- The best accountability measures are the actual evidence of postsecondary outcomes: did students enroll in, persist with, and successfully complete postsecondary education and/or training and avoid costly remediation along the way? Policymakers should set a long-term deadline for incorporating these measures into the state's accountability system.

Emphasize postsecondary readiness, in addition to test scores, in public reporting and on school report cards

- Readiness indicators and evidence such as postsecondary enrollment, remediation, and persistence rates should be prominent on all public reporting of high school performance. California can follow the lead of Illinois and a number of other states that have developed models for this reporting.
- Qualitative reviews, such as school inspections, should evaluate and report on high schools' capability for and actual performance in increasing the postsecondary readiness of students.

Postsecondary readiness goes beyond academic preparation. State and district funding mechanisms should **enable and encourage more flexible use of resources to support all facets of postsecondary readiness.** This may include support of innovative partnerships with community based organizations, such as College Summit, and academically rigorous career programs, such as Linked Learning, shown to improve readiness.

Implementing all of the above requires state leadership and action, but school districts don't have to wait. As the evidence from West Hills High, Long Beach College Promise, and June Jordan School for Equity shows, districts don't need state permission or funding to start building relationships at community colleges, universities, local businesses, and other civic organizations. K–12 educators don't need state permission or funding to work with college faculty to align content, curriculum, and performance standards or to adopt new policies, such as requiring the EAP exam for all students and changing remedial placement policies. And districts don't need state permission or funding to start sharing data.

Stories matter too. "What teachers really care about, beyond college enrollment, is whether their students are being successful," notes Paul Collins, executive director of College Summit, Northern California.[2] While the overall data picture is essential, hearing specific names of students failing or succeeding "really makes it real," he says. Surveys, Facebook pages, alumni groups, and even formal counseling programs all help to connect graduates back with their high schools. As Matt Alexander, co-director of June Jordan notes, "Teachers feel accountable to kids they've come to know and care about."[3] And, he adds, when students are not succeeding, faculty want to know why.

With or without state investment, stakeholders across the K–12 and postsecondary spectrum cannot afford to wait to start working together. The data, tools, and models to build a world-class system of education around college and career readiness are already at hand. What California needs now is leadership, resolve, and a sense of urgency to build on the work of individual districts and schools and take these efforts to scale.

Notes

1. Policy Analysis for California Education, *California's Early Assessment Program: Its Effectiveness and the Obstacles to Successful Program Implementation* (Stanford, CA: Stanford University, March 2012), http://www.stanford.edu/group/pace/PUBLICATIONS/PACE_EAP_March_2012.pdf (accessed April 19, 2012).
2. Paul Collins, in discussion with authors, April 7, 2011.
3. Matt Alexander, in discussion with authors, December 5, 2011.

Notes

1. Sheila Byrd Carmichael, W. Stephen Wilson, Kathleen Porter-Magee, and Gabrielle Martino, *The State of State Standards—and the Common Core—in 2010* (Washington, DC: Thomas B. Fordham Institute, July 10, 2010) http://edexcellencemedia.net/publications/2010/201007_state_education_standards_common_standards/California.pdf (accessed April 19, 2012).

2. Shelly Valdez, Director of Educational Collaboration for the Institute for Evidence-Based Change, in discussion with authors, December, 8, 2011. To redesign their teaching, San Diego educators used an intervention developed by the Institute for Evidence-Based Changed called the English Curriculum Alignment Project; see also Brad Phillips, "How to Break the Cycle of Remedial College Classes," GOOD Education, http://www.good.is/post/how-to-break-the-cycle-of-remedial-college-classes (accessed April 19, 2012) and West Hills High School, "Single Plan for Student Achievement," http://wolfpack.guhsd.net/images/stories/2010-2011_SPSA.pdf (accessed April 16, 2012).

3. See, for example, Phi Delta Kappa/Gallup, "A Time for Change: The 42nd Annual Phi Delta Kappa/Gallup Poll of the Public's Attitudes Toward the Public Schools," http://www.pdkintl.org/kappan/docs/2010_Poll_Report.pdf; Andrea Venezia, Michael W. Kirst, and Anthony L. Antonio, *Betraying the College Dream* (Stanford, CA: Stanford University, 2004).

4. John Fensterwald, "States differ on defining proficiency: California standards not most demanding," Silicon Valley Education Fund, October 29, 2010, http://toped.svefoundation.org/2010/10/29/states-all-over-the-map-on-defining-proficiency/ (accessed May 18, 2012).

5. Dana Hull, "Parents use test scores to pick out new houses; School index driving costs, realtors and educators say," *San Jose Mercury News*, October 29, 2004.

6. "2010–2011 California High School Exit Examination Results Released; Achievement Gap Continues to Narrow," California Department of Education News Release, August 24, 2011.

7. California State University, "EAP 2011 Test Results," http://eap2011.ets.org/ViewReport.asp (accessed February 21, 2012).

8. Ed-Data (a partnership of CDE, EdSource, and FCMAT) describes the 100 similar schools methodology as follows: "a ranking that compares each school with 100 others that have similar student populations and other characteristics." *For this sample, 20 of the 100 similar schools generated were randomly selected for our sample school. See, Ed-Data, "Understanding the Academic Performance Index,"* http://www.ed-data.k12.ca.us/_layouts/EdDataClassic/articles/Article.asp?title=Understanding%20the%20API (accessed April 9, 2012).

9. Michael Gardner, "A window into the governor's mind on education; Brown is philosophical, historical, critical in veto message," *The San Diego Union-Tribune*, October 10, 2011, http://www.utsandiego.com/news/2011/oct/10/window-governors-mind-education/?print&page=all (accessed February 22, 2012).

10. Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, *Help Wanted: Projections of Jobs and Education Requirements through 2018* (Washington, DC: Georgetown University Center on Education and the Workforce, 2010).

11. ACT, *The Condition of College & Career Readiness 2011 (Iowa City, IA: ACT, Inc., 2011),* http://www.act.org/research/policymakers/cccr11/pdf/ConditionofCollegeandCareerReadiness2011.pdf (accessed January 30, 2012).

12. John Wirt, et al., *The Condition of Education 2004* (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2004) http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004077 (accessed January 30, 2012).

13. Thomas Bailey, *Rethinking Remedial Education in Community College, CCRC Brief No. 40* (New York, NY: Community College Research Center, Teachers College, Columbia University, 2009) http://ccrc.tc.columbia.edu/Publication.asp?UID=672 (accessed January 30, 2012).

14. Manpower Group, "2011 Talent Shortage Survey Results," http://files.shareholder.com/downloads/MAN/1621405974x0x469531/7f71c882-c104-449b-9642-af56b66c1e6d/2011_Talent_Shortage_Survey_US.pdf (accessed January 30, 2012).

15. The Conference Board, Partnership for 21st Century Skills, Corporate Voices for Working Families, and the Society for Human Resource Management, "Are They Really Ready to Work?" http://www.p21.org/storage/documents/FINAL_REPORT_PDF09-29-06.pdf (accessed April 19, 2012).

16. Hart Research Associates, "One Year Out: Findings From a National Survey Among Members of the High School Graduating Class of 2010," http://media.collegeboard.com/homeOrg/content/pdf/One_Year_Out_key_findings%20report_final.pdf (accessed April 19, 2012).

17. See Common Core State Standards Initiative, "About the Standards," http://www.corestandards.org/about-the-standards (accessed on April 3, 2012).

18. See, for instance, ACT, *Ready for College and Ready for Work: Same or Different,* (Iowa City, IA: ACT, Inc., 2011) http://www.act.org/research/policymakers/pdf/ReadinessBrief.pdf (accessed April 9, 2012).

19. See, for example, The National Assessment of Educational Progress (NAEP), "Technical Panel on 12th Grade Preparedness Research," November 2008, http://www.nagb.org/newsroom/PressReleasePDFs/12grade-preparedness-report.pdf, and David Conley, "Redefining College Readiness," Educational Policy Improvement Center, 2007, https://www.epiconline.org/files/pdf/RedefiningCollegeReadiness.pdf.

20. Michael Gardner, "Rethinking School Assessment; Legislation on Brown's desk would overhaul how California measures academic success," *The San Diego Union-Tribune*, October 3, 2011, http://www.utsandiego.com/news/2011/oct/03/rethinking-school-assessment/?print&page=all (accessed February 22, 2012).

21. Ryan Reyna and Tabitha Grossman, *Creating a College and Career Readiness Accountability Model for High Schools* (Washington, DC: National Governors Association, 2012).

22. *Waiving Away High School Graduation Rate Accountability?* (Washington, DC: Alliance for Excellent Education, January 2012) http://www.all4ed.org/files/WaivingAwayAccountability.pdf (accessed February 21, 2012).

23. Lauren A. Mendoza, "Contreras Student Shines at Press Conference Urging Governor to Sign Key Education Bills," *LAUSD Journal*, September 14, 2011, http://journal.lausd.net/academics/contreras-student-shines-press-conference-urging-governor-sign-key-education-bills (accessed February 22, 2012).

24. Michael Gardner, "Rethinking School Assessment; Legislation on Brown's desk would overhaul how California measures academic success," *The San Diego Union-Tribune*, October 3, 2011, http://www.utsandiego.com/news/2011/oct/03/rethinking-school-assessment/?print&page=all (accessed February 22, 2012).

25. "College Persistence," June Jordan School for Equity, http://jjse.org/results/college-persistence/ (accessed May 19, 2012).

26. "June Jordan School for Equity Data Summary April 2011," June Jordan School for Equity, http://jjse.org/wp-content/uploads/2010/08/jjse-data-summary-april-2011.pdf (accessed February 22, 2012).

27. Matt Alexander, in discussion with authors, December 5, 2011.

28. Armon Kasmai, in discussion with authors, April 26, 2012.

29. A school classified as "typical," on average, enrolled 43.29 percent of its students in its Free/Reduced Price Lunch Program. For this sample, 20 of the 100 similar schools generated were randomly selected for our sample school. See, for instance, Ed-Data, http://www.ed-data.k12.ca.us/App_Resx/EdDataClassic/fsTwoPanel.aspx?#!bottom=/_layouts/EdDataClassic/profile.asp?tab=1&level=07&ReportNumber=16&County=19&fyr=0809&District=64725&School=1934678#specialprograms (accessed April 9, 2012).

30. A school classified as "high poverty," on average, enrolled 76.11 percent of its students in its Free/Reduced Price Lunch Program. For this sample, 20 of the 100 similar schools generated were randomly selected for our sample school. See, for instance, Ed-Data, http://www.ed-data.k12.ca.us/App_Resx/EdDataClassic/fsTwoPanel.aspx?#!bottom=/_layouts/EdDataClassic/profile.asp?tab=1&level=07&ReportNumber=16&County=19&fyr=0809&District=64725&School=1934470#specialprograms (accessed April 9, 2012).

31. See, for example, Anne Hyslop, *Data That Matters: Giving High Schools Useful Feedback on Grads' Outcomes* (Washington, DC: Education Sector, November 8, 2011).

32. *Unlocking Doors and Expanding Opportunity: Moving Beyond the Limiting Reality of College and Career Readiness in California High Schools* (Oakland, CA: The Education Trust-West, July 2011) http://www.edtrust.org/sites/edtrust.org/files/ETW%20Unlocking%20Doors%20and%20Expanding%20Opportunity%20Report%20July%202011_0.pdf (accessed April 3, 2012).

33. "Caveats," State of California, http://www.cpec.ca.gov/OnLineData/Caveats.asp (accessed April 3, 2012); John Fensterwald, "Here's to the data system that works," Silicon Valley Education Foundation, May 13, 2011, http://toped.svefoundation.org/2011/05/13/heres-to-the-data-system-that-works/ (accessed April 3, 2012).

34. Susan Headden, "How the Other Half Tests," *The Washington Monthly,* September/October 2011, http://www.washingtonmonthly.com/magazine/septemberoctober_2011/features/how_the_other_half_tests031638.php (accessed April 3, 2012).

35. Robert Balfanz, "Doing It All: Raising Graduation Rates and Standards," in *Getting to 2014: The Choices and Challenges Ahead,* (Washington, DC: Education Sector, March 27, 2012).

36. Even the state's largest and most advanced districts, such as the California Office to Reform Education, or CORE, group, a group of seven unified districts, including Los Angeles, Fresno, and Long Beach, are unable to replicate many of the functions of a statewide system. See, for example, their letter to Gov. Brown in June, 2011. http://toped.svefoundation.org/2011/12/02/california-steps-forward-back-on-school-data/comment-page-1/ (accessed April 9, 2012).

37. David N. Plank, "Data, Policy Learning, and Continuous Improvement," in *Getting Down to Facts: Five Years Later,* (Stanford, CA: Policy Analysis for California Education, May 2012).

38. Jason Song, "Brown urged to restore funds for education databases," *Los Angeles Times*, June 7, 2011, http://articles.latimes.com/2011/jun/07/local/la-me-testing-20110607 (accessed April 19, 2012).

39. Mac Taylor, *Improving Higher Education Oversight Legislative Analyst's Office* (Sacramento, CA: Legislative Analyst's Office, 2012) http://www.lao.ca.gov/reports/2012/edu/ihe/improving-higher-education-010612.pdf (accessed April 19, 2012).

40. Brad Strong, Education Director at Children Now, in discussion with authors, February 6, 2012.

41. Shelly Valdez, in discussion with authors, December, 8, 2011; see also Brad Phillips, "How to Break the Cycle of Remedial College Classes," GOOD Education, http://www.good.is/post/how-to-break-the-cycle-of-remedial-college-classes (accessed April 19, 2012) and West Hills High School, "Single Plan for Student Achievement," http://wolfpack.guhsd.net/images/stories/2010-2011_SPSA.pdf (accessed April 16, 2012).

42. Tom Chorneau, "State Education Data System, CALPADS, Makes Critical Turn," *SIA Cabinet Report*, March 26, 2012, http://www.siacabinetreport.com/articles/viewarticle.aspx?article=2270 (accessed April 30, 2012).

43. Alvin P. Sanoff, "A Perception Gap Over Students' Preparation," *Chronicle of Higher Education*, March 10, 2006, http://chronicle.com/article/A-Perception-Gap-Over/31426 (accessed April 23, 2012).

44. See Bill Tucker, *Putting Data into Practice* (Washington, D.C.: Education Sector, October 2010) for more discussion and examples of what is required to make data actionable and useful for educators.

45. Thomas Davenport, Don Cohen, and Al Jacobson, *Competing on Analytics* (Babson Park, MA: Babson Executive Education, May 2005).

46. Data Quality Campaign, "States Could Empower Stakeholders To Make Education Decisions with Data…but They Haven't Yet," http://dataqualitycampaign.org/files/DFA2011%20Mini%20report%20findings%20Dec1.pdf (accessed April 3, 2012).

47. Alexandra Bernadotte, in discussion with authors, April 25, 2012.

48. David Conley, *Redefining College Readiness* (Eugene, OR: Education Policy Improvement Center, 2011) https://www.epiconline.org/files/pdf/RedefiningCollegeReadiness.pdf (accessed April 5, 2012).

49. J.B. Schramm and E. Kinney Zalesne, *The Promise of Proficiency: How College Proficiency Information Can Help High Schools Drive Student Success* (Washington, DC: Center for American Progress, December 2009) http://www.collegesummit.org/images/uploads/whotepaper09.pdf (accessed April 5, 2012).

50. Leslie Hsu, in discussion with authors, April 26, 2012.

51. John Fensterwald, "Brown's mystifying CALTIDES veto," Silicon Valley Education Fund, August 15, 2011, http://toped.svefoundation.org/2011/08/15/browns-mystifying-caltides-veto/ (accessed April 3, 2012).

52. "Governor's Budget May Revision 2012-2013," California Department of Finance, May 14, 2012, http://www.dof.ca.gov/documents/2012-13_May_Revision.pdf (accessed May 18, 2012).

53. Arun Ramanathan, "New CALPADS Data Reveal Accurate California Graduation and Dropout Rates for All Students; Shows Unacceptable Results for Students of Color and English Learners," *The Education Trust-West,* August 11, 2011, http://www.edtrust.org/west/press-room/press-release/new-calpads-data-reveal-accurate-california-graduation-and-dropout-ra-0 (accessed April 5, 2012).

54. Kathryn Baron, "CALPADS goes to college," October 10, 2011, http://toped.svefoundation.org/2011/10/07/calpads-goes-to-college/ (accessed April 5, 2012).

55. John Fensterwald, "Here's to the data system that works," Silicon Valley Education Foundation http://toped.svefoundation.org/2011/05/13/heres-to-the-data-system-that-works/ (accessed April 3, 2012).

56. See, for example, David T. Conley, Kathryn V. Drummond, Alicia de Gonzalez, Mary Seburn, Odile Stout, and Jennifer Rooseboom, *Lining Up: The Relationship between the Common Core State Standards and Five Sets of Comparison Standards* (Eugene, OR: Educational Policy Improvement Center, 2011) https://www.epiconline.org/files/pdf/LiningUp-FullReport.pdf (accessed April 23, 2012); Sheila Byrd Carmichael, W. Stephen Wilson, Kathleen Porter-Magee, and Gabrielle Martino, *The State of State Standards—and the Common Core—in 2010* (Washington, DC: Thomas B. Fordham Institute, July 10, 2010), http://edexcellencemedia.net/publications/2010/201007_state_education_standards_common_standards/California.pdf (accessed April 19, 2012).

57. Eileen Reed, Janie Scull, Gerilyn Slicker, and Amber M. Winkler, *Defining Strong State Accountability Systems* (Washington, DC: Thomas B. Fordham Institute, April 2012) http://www.edexcellencemedia.net/publications/2012/20120404StateAccountability/040412StateAccountabilityFINAL.pdf (accessed April 19, 2012).

58. See, for example, Mark Somma, "University funding faces a crossroads," *Fresno Bee*, March 1, 2012, http://www.fresnobee.com/2012/02/29/2741754/mark-somma-university-funding.html, (accessed April 19, 2012); Kevin Carey, "Why Are Community Colleges Being Treated Worst When They're Needed Most?" *The New Republic*, April 17, 2012, http://www.tnr.com/article/politics/102724/california-community-college-crisis-university (accessed April 19, 2012).

59. Andrea Venezia, Michael W. Kirst, and Anthony L. Antonio, *Betraying the College Dream*, (Stanford, CA: Stanford University, 2004) http://www.stanford.edu/group/bridgeproject/betrayingthecollegedream.pdf (accessed April 3, 2012).

60. Information Alliance for Education to the Honorable Jerry Brown, June 2, 2011, http://www.capta.org/assets/managed/whatsnew-pdf/Letter_CALTIDES_CALPADS.pdf (accessed April 20, 2012).

61. "California Seeks State-Defined Waiver to Provide Relief From Unworkable Mandates of 'No Child Left Behind,'"California Department of Education, May 10, 2012, http://www.cde.ca.gov/nr/ne/yr12/yr12rel45.asp (accessed May 29, 2012).