

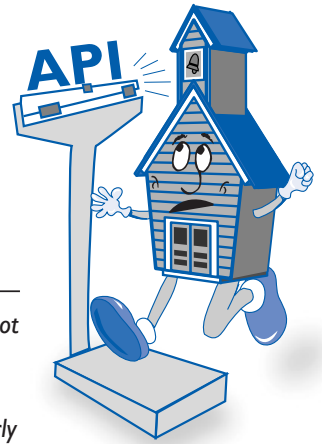


Show Me the Data

EdSource Forum focuses on using and improving data, and on NCLB

At EdSource's 26th Annual Forum—California School Reforms: Show Me the Data!—**Brian Stecher**, keynote speaker and senior social scientist at RAND, gave a snapshot of what the data show about the impact of state reforms. He and **Phil Daro**, director of the Public Forum on School Accountability, discussed the need for high quality, statewide education data to measure and improve student performance, particularly in light of new federal requirements under the No Child Left Behind Act (NCLB).

Christopher Cross, senior fellow at the Center for Education Policy, talked about the history of the NCLB and its impact on California. **Geno Flores**, state deputy superintendent, assessment and accountability, and **Bill Padia**, director of the California Department of Education's Policy and Evaluation Division, explained how the state plans to implement NCLB. The comments of Stecher, Daro, Cross, Flores, and Padia are summarized in this report.



The views presented here belong to the speakers at the April 2003 Forum. They do not necessarily reflect the perspective of EdSource, its board, or its funders.

EdSource acknowledges the generous support of our funders, which made this year's Forum possible. For a list of our contributors, see page 12.

The state's data system needs to be more robust

The state's incomplete data system and a constantly growing and changing set of policies make it difficult to determine exactly how well California's education reforms are working, said keynote speaker Brian Stecher, a senior social scientist at RAND. One of the major missing ingredients, he said, is a unique "student identifier" that would make it possible to see how individual students perform over time. Speaker Phil Daro, director of the Public Forum on School Accountability, agreed and suggested other changes to the state's system.

A "student identifier" would help policymakers and teachers

Currently the state collects standardized test scores from all test-takers in a school, summarizes those scores into one number—a school's Academic Performance Index (API) score—and compares its API score to the prior year's score to measure a school's annual progress. However, the students in a school differ from one year to the next so the "before" snapshot taken one year has different students than the "after" snapshot taken the following year. California uses this approach because it cannot track students from year to year as they move through the system.

With a unique, confidential identifying number assigned to each student for the student's academic career, the state could associate students' test scores with their identifiers year after year and see the effect various programs and schools have on student performance. Test information on individuals over time is known as "longitudinal data."

Stecher said longitudinal data would provide much more useful information for teachers to improve instruction, state policymakers to enhance California's accountability system, and researchers to be better able to analyze which educational programs are the most effective.

If students had identifiers, he said, "then I could show you summaries based on actual gains from individuals rather than approximate tabulations that ignore students who move in and out of schools and students who are held back."

Cross-sectional data have their limits

Daro agreed about the need for longitudinal data. Currently, the state has cross-sectional data that is useful in many ways, he noted. "The API is a composite of many grades and subjects, averaging out a lot of random fluctuations. The API, itself, is quite stable and useful for the global question of how a whole school is functioning." Cross-sectional data can also answer questions such as whether changes in the program are making things better for successive classes, he added.

But, Daro said, such data do not answer the question, "How is Johnny doing?" Relying only on cross-sectional data not only limits the usefulness of an accountability system but also its acceptance by educators. Cross-sectional data gives educators the ability to compare this year's third graders to last year's third graders, he said. "Now I want to take a teacher's eye view of that. Teachers don't think that this year's third graders are comparable to last year's third graders. They see very real, in-your-face differences. So there is a credibility problem at the school level just relying on this cross-sectional data."

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Opinion leaders participate in EdSource panels

The EdSource Forum took place on April 3 in Southern California—moderated by **Maggie Carrillo Mejia**, superintendent of the Montebello Unified School District—and April 4 in Northern California, moderated by **Gerald Hayward**, former co-director of Policy Analysis for California Education.

Besides the speakers, an afternoon panel consisting of state and national opinion leaders weighed in on the Forum topics. Some of their comments can be found in our upcoming spring newsletter, *EdSource Extra!*, and online at www.edsource.org. Panelists included:

- **John Merrow**, host/executive producer, *The Merrow Report* (both days)
- **Larry Aceves**, president, Association of California School Administrators (April 3)
- **Bob Wells**, executive director, Association of California School Administrators (April 4)
- **Reed Hastings**, president, State Board of Education (April 3)
- **James Lanich**, director, Just for the Kids—California (April 4)
- **Wayne Johnson**, president, California Teachers Association (April 3)
- **Barbara Kerr**, vice president, California Teachers Association (April 4)
- **Carla Niño**, first vice president, California State PTA (April 3)
- **Nancy Adalian**, vice president for parenting education, California State PTA (April 4)

And cross-sectional data can produce very different results from longitudinal data. Daro gave the example of the reading scores in one grade level at schools in Los Angeles Unified School District, which keeps track of individual student performance. When researchers compared a cross-sectional measure (such as the test scores for all third graders last year compared to this year's third graders) with a longitudinal measure (tracking the performance of each student from third to fourth grade), 31% of the schools appeared to be doing better using the cross-sectional approach than when the data were examined longitudinally. Another 8% of the schools appeared to be doing worse when a cross-sectional approach was used compared to the longitudinal analysis. "If you ask about Johnny getting better from third to fourth grade, you get a reverse story when you use longitudinal data in 39% [31% + 8%] of the schools," Daro said.

Another advantage of a longitudinal system, Daro said, is the ability to focus on each individual child's improvement. "With cross-sectional data, the system pays attention to kids you can move across the line to

the next higher level," he said. For example, the state's goal is for all students to be "proficient" in English language arts. Rewards in the future, particularly under NCLB, will likely be based on how many students a school can bring to that level. Thus if a school works more extensively with students who score on the high end of "basic" on the test (the level below "proficient"), they could potentially reap more rewards than focusing on students with scores that are just barely "basic." Daro suggests keeping the emphasis on moving students "across the line," but add to that rewards based on the individual growth of every student. "If we add a longitudinal measure, then we can do something like Florida does," he said. "In their equivalent of an API, one of the indices is, 'What percent of your students met their individual growth targets?' Each student has value in the system."

Using student identifiers raises privacy issues

Daro acknowledged that a student identifier system elicits concerns about privacy. "Obviously we have to protect the confidentiality of the students' identity in any system that we have," Daro said. "The identity of

the student can be protected while still linking different elements of a student's data together, especially a student's performance scores from year to year."

Information such as a student's test scores and demographic data would be linked to the student identifier. (Examples of demographic data are students' ethnicity, primary language, parents' education level, and whether they are eligible for free or reduced price meals.) The data are encrypted for protection and privacy.

California can look to other states to develop such a system, Daro said. "States solve this privacy problem all the time." (To see what other states have done, go to: www.doe.mass.edu/infoservices/data, www.tea.state.tx.us/peims, and www.state.tn.us/education/sm_menu)

Legislators address the need for a student identifier system

Senate Bill 1453 (Alpert), signed by Gov. Gray Davis in September 2002, provides up to \$6 million to develop and implement a statewide longitudinal data system and \$880,000, plus any funds remaining from the \$6 million, for collecting and reporting data for the No Child Left Behind Act (NCLB).

Because a feasibility study has not yet been done, the California Department of Education (CDE) can only give a rough estimate of the cost and the timeline to develop such a system—\$4 million to build the database over three years. That amount does not cover funds for generating and maintaining unique student identifiers or other costs associated with the program. For more details on this proposed system as well as a follow-up bill, Senate Bill 257 (Alpert) introduced this year, see the box on this page.

Educators could look to the healthcare system

In response to a question from the audience about "value-added analysis"—the use of longitudinal data to determine what value teachers or schools add to student achievement—Stecher said he could support such an approach as long as the technical issues are "looked at very carefully." An example of such a technical issue is how to accurately determine the ability of students when they first enter the classroom or school. He pointed to the medical system as a potentially good model.

"Healthcare researchers look at the outcomes of medical interventions to try to see how efficient doctors and hospitals are, but they don't look at outcomes in isolation," he explained. "They use sophisticated models called 'risk-adjustment models' to adjust for the background conditions of patients." For example, a patient with the flu who is old and has diabetes is harder to treat than a patient

California begins the development of a statewide longitudinal data system

The statewide data system envisioned in Senate Bill 1453 (Alpert, 2002) will build on the work of the California Student Information Services (CSIS), a large-scale, long-term project to create a universal electronic data collection and reporting system so that all local student information systems can communicate with each other, the California Department of Education (CDE), and public colleges and universities.

CSIS has created 1.8 million student identifiers. The state will have to create another 4.7 million identifiers to cover all students. The Fiscal Crisis and Management Assistance Team (FCMAT) will take the lead on that effort. FCMAT has developed a 2 1/2-year strategy to assign identifiers to the students in more than 800 school districts and county offices of education (COEs) currently not participating in CSIS, according to an as-yet unapproved expenditure plan. The districts and COEs would be reimbursed for the cost of generating and maintaining the identifier for each student.

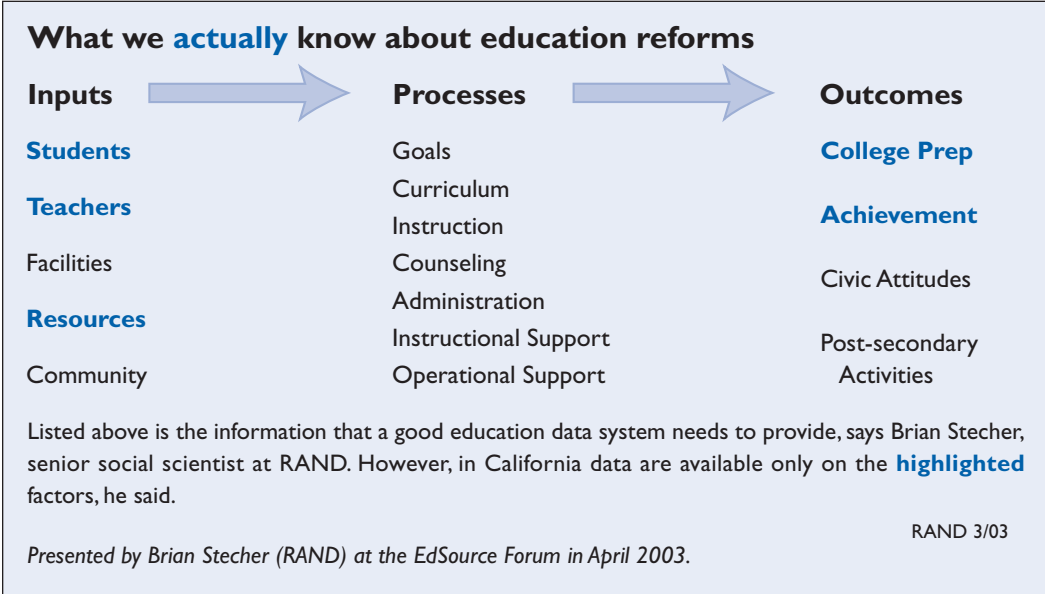
The legislation requires CDE to create a committee to advise on privacy, access, and which data elements to include. The committee will consist of a representative from each of five state agencies, eight other members from the field, PTA, research communities, and an expert with experience in other states. In addition, CDE must contract for the development of a feasibility study report. Until that report is completed, the department cannot precisely estimate the cost or timeline for developing the database, though rough estimates indicate a cost of about \$4 million and a time span of about three years.

A follow-up bill introduced this year, Senate Bill 257 (Alpert), would:

- Provide \$6 million for a second year of implementing SB 1453;
- Require an already-existing advisory committee to develop a method by July 1, 2004, for generating annual gain scores for students based on longitudinal data (gain scores indicate the growth from one year to the next); and
- Require the state to use students' gain scores to measure schools' academic performance.

with the flu who is young and otherwise healthy. Healthcare researchers try to adjust for this difference in judging how well the hospital or doctor responds to the patient.

"In education, we would need to do something similar before I'd be comfortable using simple value-added measures to determine how well a teacher does in improving the achievement of a given student, or how well a school does in improving the achievement of the group of students that it serves," he said. But, he added, such an approach is possible and is "probably a better way to proceed than our current approach. We need to be able to answer the question: 'What's the incremental value of being in this classroom or this school?'"



“It’s clear that achievement in the lower grades has been increasing, but class size reduction isn’t the only intervention that has occurred,” he said. “If you consider the whole collection of programs that focused on early literacy and early student achievement—something in that mélange is leading to improved outcomes. It’s difficult to say any one piece is more responsible than another, or to apportion the gains to class size, better professional development, a new curriculum, or the various other efforts.”

Providing data on “processes” is key

Stecher stressed the need for data in addition to the expenditure and test score data the state collects now. With a strong system, one could measure the effects of new policies on practice, something test scores alone cannot show, he said. He broke the state’s educational system into three components: inputs, processes, and outputs. (See the box on this page.) Data on all three components are necessary to analyze the impact of policy decisions, he said.

Inputs: “We would like to be able to provide a clear description of the resources that are going into the system,” Stecher said, adding that the state has fairly good data on expenditures and student and teacher characteristics. However, he said, there are few data on facilities and community inputs, such as indirect support and parent engagement.

Processes: What is completely lacking, Stecher emphasized, are data on the educational processes. “We would like to be able to describe what happens to students when they interact with the educational system,” he said. Processes include goals, curriculum, instruction, counseling, administration, and instructional and operational support. “We don’t know much about what’s happening in schools,” he said, making it difficult to determine which inputs are linked to which outcomes.

Stecher gave the example of RAND’s research on class size reduction. Although students in smaller classes have done better on achievement tests, Stecher said there was no way to determine what role class size played in those results.

Outcomes: Ultimately, policymakers need to know about outcomes—“what are the results of this engagement,” Stecher said. Outcomes include not only how well students do in math and science but also how well they meet state standards in less tested subjects, such as art or civics, and their success after graduating from high school. Currently, the state has data only on achievement and the number of high school graduates who have completed the courses required for eligibility for the University of California (UC) and California State University (CSU) systems.

If the state had more complete data on inputs, processes, and outcomes, “we might be better able to understand how to improve the educational system,” he said.

A stable system allows for better measurements

Another issue, Stecher said, is the instability of the assessment system, making it difficult to track outcomes over time. “It would be nice to have a stable system so that we could actually compare things directly from one year to the next,” he said. Stecher gave the example of the Academic Performance Index (API), the composite measure based on a school’s student test scores that is used to rank California schools.

“The API is a tricky measure to use,” Stecher said, “because it has changed each cycle. So you can’t simply take API points over time and draw a line through them.”

Initially the API included only the results of a nationally norm-referenced test. Gradually California Standards Test (CST) results as well as scores from the California High School Exit Exam (CAHSEE) have

been added. Although the changes in the API have made researchers' work more complicated, the new measure is better aligned to the state's academic content standards.

Speaker argues for a core of data controlled by the state

"In California we have a unique funding system based on Proposition 98, which guarantees minimum funding for K-12 schools and community colleges," Phil Daro said. Only funds given to local school districts—not state agencies—are counted as Proposition 98 dollars, encouraging lawmakers to allocate funds directly to districts wherever possible. "As a consequence, it is difficult for the state to adequately fund the state agency role and function in the accountability system," he said.

Daro's organization, the Public Forum on School Accountability, recommends that a state agency be put in charge of a core of student data. Other agencies within the state could also have their own data systems, but they would all draw on this core of student data.

All the state agencies would have the data systems they need "so the teacher's retirement system knows when to write its checks and the California Department of Education (CDE) has the data for its various reports, and each agency has its own cycle," he said. "But they all also draw on this core of student data. It's not all the data that all the agencies have; it's just this one common core that they use."

The role of the state system "is to provide as a reference something that's uniform, reliable, and independent of district control," Daro added.

Data need to flow both ways

Although a common core of data is crucial, Daro said, decisions on how to change what is happening inside a district or school must rely on both required state standardized test data and local data.

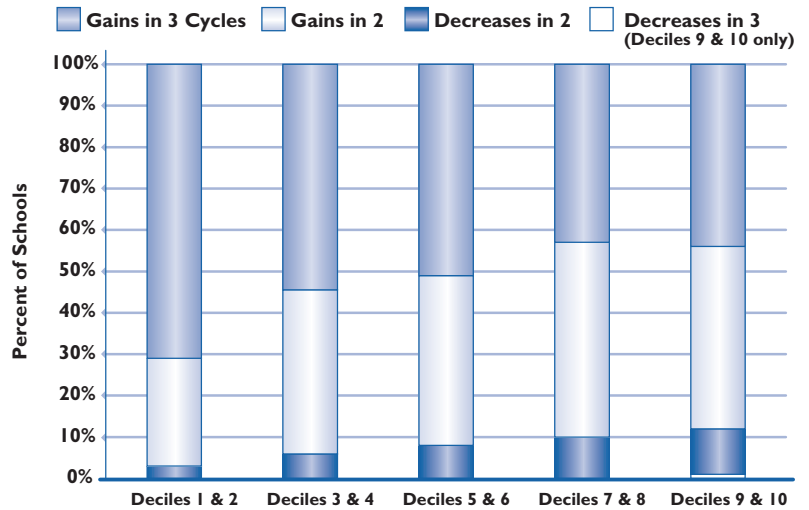
Daro compared the data based on standardized test scores to a person's annual physical. "Doctors do the relatively inexpensive blood tests and get all these numbers," he said. "If you're on the wrong side of a number, you go back for more [focused and] expensive tests." The state testing system provides the basic annual physical for the schools. But if a school's scores on this physical are not good, it is up

Figure 1 What the data show

Based on the API, most elementary schools are improving; but student performance is still strongly related to parent income and education

Forum keynote speaker Brian Stecher, senior social scientist at RAND, summarized what the data show about the impact of state reforms, emphasizing that the available data allow "a sort of partial measure of opportunities to learn and to teach that can be linked to a partial measure of outcomes." The links, he added, are "indirect at best." Parts of his presentation will be featured throughout this report.

Most elementary schools had gains in all three API cycles from 1999 through 2002

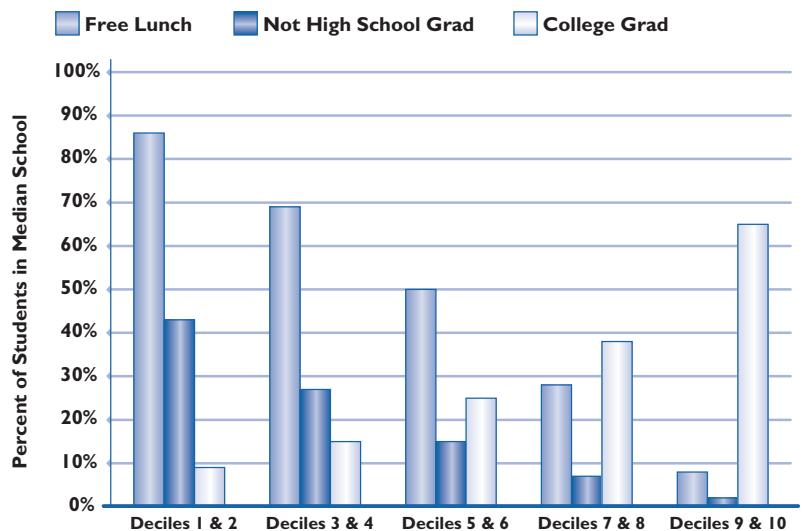


Note: Deciles are based on 1999 API rankings.

Data: California Department of Education (CDE) API Database

RAND 3/03

Parent income and education by API Decile in 2002



Data: CDE API Database

RAND 3/03

Most elementary schools have shown gains in the Academic Performance Index (API) from 1999 to 2002, but the index also reflects a continuing difference in the performance of schools based on students' family characteristics.

Presented by Brian Stecher (RAND) at the EdSource Forum in April 2003.

to the districts and schools and teachers to use additional local assessments to determine what is not working in that school. “There’s no way the state tests will ever capture everything that’s in the state standards, or even come close to that,” he said.

This interplay of statewide tests and local data creates “a reciprocal system,” Daro said. For example, state test data could show that students from low-income families are not improving. Local data could then provide information on opportunity to learn—whether the students living in poverty have the same number of fully credentialed teachers and are being taught the same curriculum from the same textbooks as students from higher-income families.

“Data, if they flow up from the classroom and up from the teachers, can help give clarity to what’s going on in those classrooms and to the voices of teachers,” Daro said. “Without that, then we’re just shouting at people to work harder.”

No Child Left Behind Act (NCLB) makes strong demands on states

In January 2002, President George W. Bush signed the federal No Child Left Behind Act (NCLB), which is the 2001 reauthorization of the Elementary and Secondary Education Act (ESEA) of 1965. NCLB puts increased pressure on states to improve achievement for all students and to develop data systems to track the state’s efforts. NCLB has a number of components called “titles.” A large portion of NCLB funding is under Title I, which is aimed at schools serving students living in poverty. But funding under other titles is not necessarily based on income criteria.

Politics play a role in creating NCLB

Christopher Cross, senior fellow at the Center for Education Policy, said the best description he has heard of NCLB is that it is “based on very liberal principles using very conservative methods and enforcement.” Conservative legislators, with strong support from Bush, and liberal leaders, including civil rights activists, put together NCLB.

NCLB is really a continuation of a direction that began with the reauthorization of ESEA in 1994, Cross said. Then the federal government required states to create a single statewide accountability system. The government also emphasized a need for states to focus

on helping all children succeed and hiring and training more qualified staff.

But, Cross said, NCLB goes far beyond what was contemplated in 1994, partly because Congress was frustrated that most states had essentially ignored the 1994 law and that the achievement gap between advantaged and disadvantaged children continued to grow.

“There was an enormous feeling that a lot of states—particularly big states and especially California—had ignored federal policy,” Cross said. “They just thumbed their noses and said, ‘We’re too big. We’ll do what we want to do; and if you don’t like it, sue us.’”

Part of the reason the states felt free to ignore the 1994 law was that the only enforcement mechanism the federal government had was to withhold money. “That was the atomic bomb of policy,” Cross said. “You couldn’t use it because it was too dramatic and had the negative consequences of basically cutting off aid to the very children you were trying to reach.” Under NCLB, the enforcement mechanisms allow the federal government to cut off funds in discrete packages for noncompliance of certain sections of the law, as opposed to an all-or-nothing approach.

NCLB has many aims but foremost is closing the achievement gap

Cross said the act has several major themes, the most important being the closing of the achievement gap between various racial and ethnic groups, poor and non-poor, those who have disabilities and those who do not, and English language learners and fluent English speakers.

Achievement gap: The act is based on the premise, Cross said, that unless schools begin to narrow the achievement gap, “we are going to be, as a nation, much poorer in every aspect of that word generations down, not only economically but culturally and as a democracy.” This is particularly true, Cross added, because of the growing racial and ethnic diversity in this country, which is especially evident in California. The law requires that all students reach a state-defined proficiency level in English language arts and math by 2013–14.

“I think the feeling on the part of the Congress, the administration, and the others was if you don’t lay out a very dramatic timeline and requirement, the chances of significantly narrowing the gap are very remote,” he said. “It’s an ambitious goal. I have no doubt that we’re going to see continuing fights about that. But I don’t think you’re going to see any backing away from the notion that the achievement gap has got to be

the focus of federal policy in education in the next decade or two.”

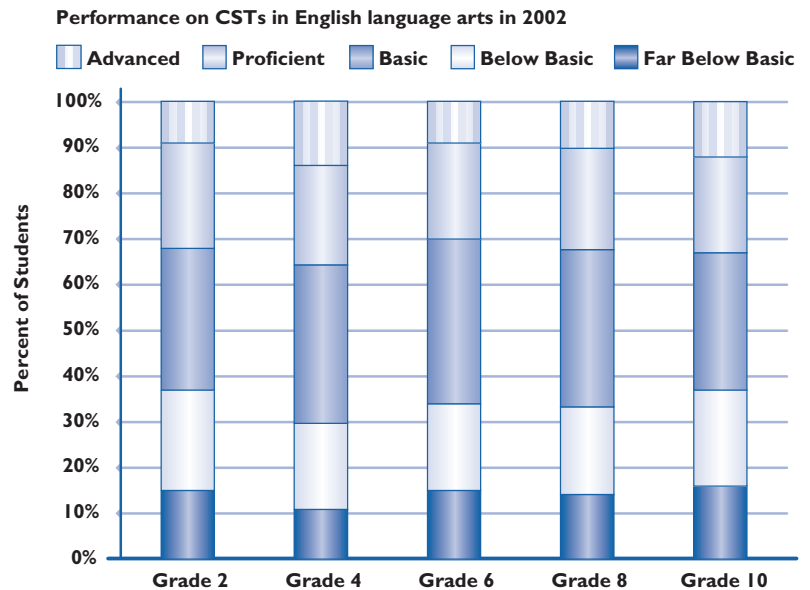
Accountability: NCLB emphasizes holding districts and schools accountable for student performance, with the “accountability mechanisms greater in this law than they have ever been before,” he said. Students in schools that, based on specific assessments, have been identified as needing improvement for failing to make “adequate yearly progress (AYP)” for two consecutive years have the option to transfer to either another public school within the district or even into other districts if the state permits. After three consecutive years in a school that fails to make adequate yearly progress, students must be given access to tutoring and other services such as summer school. Schools needing improvement must spend a set percentage of their federal funds on staff development, supplemental services, and transportation for students who choose to transfer. If schools consistently fail to improve, the state can either shut down those schools or reconstitute them. Parents also have the right to remove their children from “persistently dangerous” schools, which California defines as having had a violent crime and a specified percentage of students expelled for violent or drug-related crimes. Each state is required to publish a list of such schools.

Beginning in 2005–06, annual testing is required for grades 3–8 (plus at least once in grades 10–12) in math and reading or language arts, with accommodations required for Special Education students and English learners. By 2007–08, schools must also administer science assessments taken once during each of three grade spans: 3–5, 6–9, and 10–12. “California is pretty well ahead on the assessments,” Cross said, particularly in math and language arts. The state plans to develop general science assessments. NCLB also allows the state to exclude only 1% of disabled students from the assessment used for the general student population. Severely disabled students will be tested with the California Alternate Performance Assessment (CAPA). Assessments must be aligned to the state’s standards, which is the direction California is going.

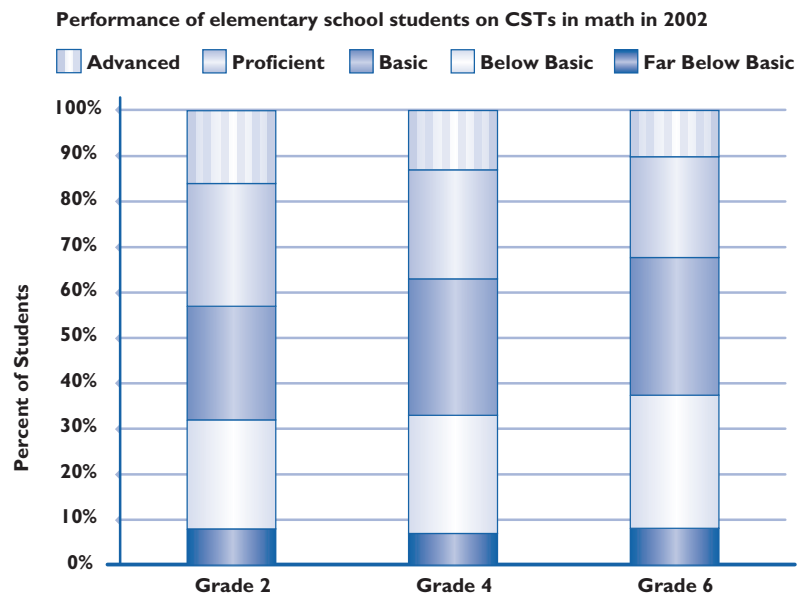
Furthermore, if states want to receive NCLB funding, they are required to participate in the National Assessment of Educational Progress (NAEP), which tests a small sample of students. California already participates in NAEP, which will be used as a benchmark, Cross

Figure 2 *What the data show*

California’s goal is to have all students perform at proficient or above on California Standards Tests (CSTs)



Data: California Department of Education (CDE) STAR Database RAND 3/03



Data: CDE STAR Database RAND 3/03

About 30% of all students are proficient or above on CSTs in English language arts, and about 40% of elementary school students are proficient or above on CSTs in math.

Presented by Brian Stecher (RAND) at the EdSource Forum in April 2003.

said. “If a state says that 60% of its students are performing proficiently and on NAEP you see that 7% are performing proficiently, you should begin to ask some questions.”

Golden State Exams may be used for college placement in the CSU system

Golden State Exams were offered by the state so students could demonstrate high achievement in 13 subject areas. Because of budget cuts, the number of exams have been reduced to a high school mathematics test and English tests of reading/literature and written composition.

What the state hopes to do by November is use the scores on these exams to determine placement in the California State University (CSU) system, Geno Flores said. Scores from the CSTs in English language arts and the two Golden State Exams in English will be combined and compared against a cut score. Scores on the CSTs in math and the Golden State Exam in math will also be combined. Based on those scores, CSU will determine whether students are college-ready for English and math, provisionally compliant, or not compliant.

Then, Flores said, CSU will be able to say to the student either:

- “We think you’re ready”; or
- “We’d feel better if you took another math class during your senior year or did something to improve your writing”; or
- “You’re going to be in for remediation at college.”

Teacher quality: Title II of NCLB promotes the improvement of teacher quality. Unlike in the past when the ESEA reauthorization policies focused primarily on schools receiving federal funding, NCLB uses federal leverage to require that all teachers in each and every school be “highly qualified,” including subject-matter expertise for secondary school teachers, by 2005–06.

“This is a dramatic change,” Cross said. “For the first time, we have used the federal law to get beyond just those children being served with federal money and those teachers being paid with federal money to affect all teachers in all schools and, obviously, all children in all schools.”

Furthermore, beginning in January 2002, most new teacher aides supported by federal funds must have either two years of college or pass an exam showing that they have subject-matter knowledge. Aides hired before 2002 must meet these requirements by January 2006. All instructional aides must also be under the direct supervision of a teacher.

Scientifically-based educational practices: NCLB funds are to be used for effective educational practices that have been scientifically tested. The law sets up a “gold standard,” he said, “which is random-assignment, field-based studies along the lines of what you see in medicine.” A random-assignment study is one in which

one group of students receives some kind of “treatment” (in this case, an educational program) and a group of similar students does not get the “treatment,” and the two groups’ progress is compared. Relying only on scientifically-based practices is “a theme that will exist in the reauthorization of the Vocational Education Act, the Individuals with Disabilities Act, the Higher Education Act, and everything that comes out of Washington, I’m convinced,” Cross said.

California responds to NCLB

NCLB is causing California to rethink its school accountability system. The State Board of Education (SBE) is currently wrestling with how to meld California’s system with the new federal requirements while maintaining the API as its centerpiece.

NCLB is “quite a profound piece of legislation in how it basically drives a state’s accountability system,” said speaker Bill Padia, director of the California Department of Education’s Policy and Evaluation Division. Unlike the state’s API system, which focuses on growth, NCLB “is about a status bar,” Padia said. “It doesn’t matter if you grew three years in a row. As long as you’re below the status bar, you do not make adequate yearly progress.”

Under the new law, states must show that they are making “adequate yearly progress (AYP)” toward the goal of having all students “proficient” in English language arts and math by 2013–14. It is up to each state to come up with its own definition of “proficient,” and state officials say California has adopted a fairly tough standard. But the state has also chosen a stair-step approach to reaching the 100% goal, allowing schools more time the first several years to attain proficiency targets, said Geno Flores, state deputy superintendent, assessment and accountability.

California first submitted its plan to meet NCLB accountability requirements in January, and since then there have been ongoing discussions between representatives of the state and federal governments. On May 1, California submitted additional information and is awaiting comment from the federal government.

All students must be tested, including significant subgroups

NCLB requires that schools test 95% of their students, including 95% of each subgroup based on income, ethnicity, disability, or primary language.

In grappling with this issue, California and the federal government have been going back and forth about how

many students comprise a significant subgroup. The state is recommending that a significant subgroup contains either:

- ✓ 50 students if they represent 15% or more of the school population, or
- ✓ 100 students.

Although these numbers may seem large to federal officials, “we have some high schools that have 4,500 kids,” Flores said. “So although 100 kids is a lot of kids, in reality it’s 2% of that school’s population.” The ethnic diversity of the state’s school population also means that such a large high school could have quite a number of subgroups, all of which must make their AYP goals.

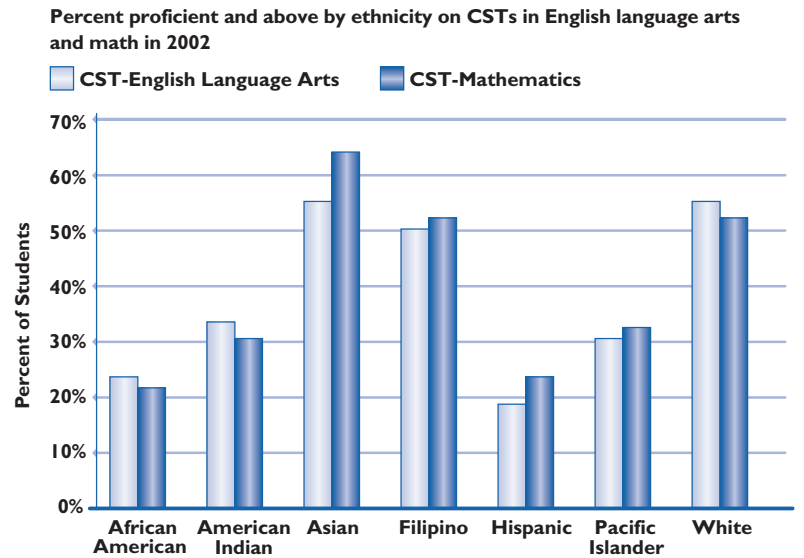
California had already been holding schools accountable for the performance of subgroups based on ethnicity and income, but not on disability or English proficiency. Tracking performance of subgroups, in particular English learners (ELs), will be easier once California has a longitudinal data system. English learners lose their EL status when they become proficient in English, making tracking them over time to determine their subgroup’s progress particularly difficult without a student identifier.

NCLB requires annual measurable objectives (AMOs) for English language arts and math

NCLB requires that students attain “proficiency” in English language arts (ELA) and math, but it leaves it up to the state to define “proficiency.” The state must come up with measures of AYP in ELA and math called annual measurable objectives (AMOs). California’s plan for AMOs follows:

- ✓ For grades 2 through 8, California is using the score of “proficient” on California Standards Tests (CSTs) in ELA and math. CSTs are scored as far below basic, below basic, basic, proficient, and advanced. The state considered using “basic” to meet the NCLB requirement for “proficient” because, the board said, California has such high standards that a student scoring “basic” would be “proficient” based on federal criteria. But, in the end, board members voted for the higher goal of “proficient.” “I think the

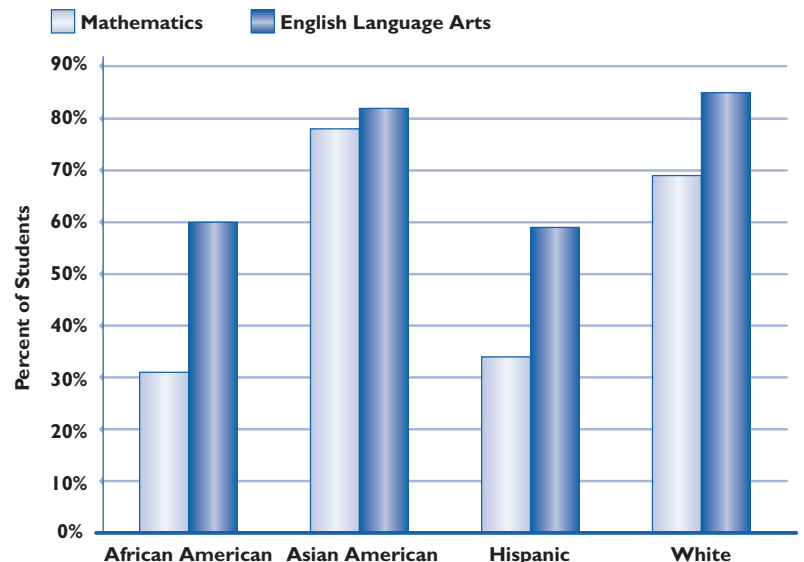
Figure 3 What the data show
Ethnicity is associated with student performance on California Standards Tests (CSTs) and the exit exam



Data: California Department of Education (CDE) STAR Database

RAND 3/03

Estimated percentage of class of 2004 who have passed the California High School Exit Exam as of May 2002—by ethnicity and subject



Data: CDE

RAND 3/03

There are “lingering differences” among students based on ethnicity, said Brian Stecher, senior social scientist at RAND. “I’m not suggesting a causal relationship but just pointing out the persistence of these gaps on a variety of measures.” These differences show up on both the California Standards Tests (CSTs) and the California High School Exit Exam (CAHSEE). White and Asian students have a “dramatically higher pass rate” on the CAHSEE than Hispanic and African American students.

Presented by Brian Stecher (RAND) at the EdSource Forum in April 2003.

To Learn More

EdSource website For links to data sources and “sound bites” from the Forum panelists, go to our special web page about the Forum: www.edsource.org/forum03res.cfm

Ed-Data Partnership website Provides financial, enrollment, and demographic data (with links to performance data) for every school and district in California. This site provides an interactive feature that allows viewers to generate comparisons of school districts or of schools using a variety of criteria. www.ed-data.k12.ca.us

California Student Information Services (CSIS) Helps school districts implement comparable student information systems so that electronic data can be more readily transferred. <http://www.csis.k12.ca.us/>

California’s No Child Left Behind (NCLB) website Contains information on the state’s plan to meet NCLB guidelines. For the latest application, click on “California’s Consolidated Application,” and then click on “May 1, 2003.” www.cde.ca.gov/pr/nclb/

No State Left Behind: The Challenges and Opportunities of ESEA 2001 (Education Commission of the States, February 2002) is a detailed summary of the federal No Child Left Behind Act (NCLB). It also looks at states’ readiness to implement provisions of the law. www.ecs.org

Independent Evaluation of the CAHSEE: Analysis of the 2001 Administration (HumRRO, January 2002). A new HumRRO report came out in May 2003. www.cde.ca.gov/statetests/cahsee

CDE Standards and Assessment Division Provides information on the state’s testing system. www.cde.ca.gov/statetests

National Assessment of Educational Progress (NAEP) For information about the national NAEP tests, often called the nation’s report card, go to: <http://nces.ed.gov/nationsreportcard>

Center for Education Policy The center’s mission is to help Americans better understand the role of public education in a democracy and the need to improve the academic quality of public schools. www.ctredpol.org

RAND A national think tank that supports research in a number of areas including education policy. www.rand.org

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board made a very courageous decision by sticking with their high standards,” Padia said.

- ✓ For secondary students, California’s system that allows students to progress in math at their own pace means CSTs in math will not work. Depending on their abilities, 10th graders could be taking courses ranging from Algebra I to Calculus. Their CSTs, which are end-of-course tests, reflect the course they are taking. Instead, the state plans to use California High School Exit Exam (CAHSEE) scores at grade 10. The CAHSEE is the only common test for high school students that covers both ELA and math. This use of the CAHSEE is quite different from its use as an exit exam, Padia and Flores said, and a score that will be considered “proficient” will be higher than the score needed to pass.
- ✓ For students with severe cognitive disabilities, the state will use the new California Alternate Performance Assessment (CAPA). However, under NCLB, the state can exclude only 1% of its disabled students from the regular testing system.

The act requires additional indicators of student progress

NCLB requires states to track high school graduation rates and use an additional academic indicator for elementary and middle schools.

California plans to use the API as the additional academic indicator for all schools in order to maintain the continuity of the state’s accountability system, and high school exit exam data as a proxy for the high school graduation rate. (Because California does not have individual student identifiers, the state is unable to provide an accurate graduation rate.)

Defining a starting point for measuring “adequate yearly progress” is key

Based on NCLB guidelines, California picked a starting point against which to measure AYP. The state then chose a model that begins slowly in its demands on schools to improve, rising more quickly after the first six years. By 2013–14, the federal government expects all children in the nation to meet their own state’s definition of “proficient” in ELA and math.

For grades 2–8, a school must now have 13.6% of its students scoring proficient or advanced in ELA, Flores and Padia said, to meet California’s initial benchmark. For math the starting point is a little higher, at 16.0%, because statewide more students are proficient in math than ELA. This is probably because of the preponder-

ance of English learners in California schools who tend to do better in math because language is less of an issue, they said.

High schools have a lower starting point based on a state-determined cut score on the California High School Exit Exam. For English it's at 11.2%, and for mathematics it's at 9.6%, Flores said.

The state is not requiring schools to show uniform progress each year. Instead, the state's plan assumes schools will have a slow start. It gives them three years to meet the next benchmark and another three years to meet the following benchmark. Beginning in 2007–08, the benchmarks rise uniformly and more rapidly, with increases required each year to meet the goal of 100% by 2013–14.

This “stair-step approach” (versus linear, uniform improvement) was first suggested by state leaders in Ohio and was approved by the federal government for that state, Padia said. He said California considered setting more aggressive targets in the earlier years but opted instead for the stair-step approach.

Padia said he expected about 50% of California schools will not meet AYP in the first year of this system because each school is responsible for the whole school and, depending on the diversity of a school's population, up to 10 subgroups (seven different ethnic groups, the economically disadvantaged, students with disabilities, and English learners).

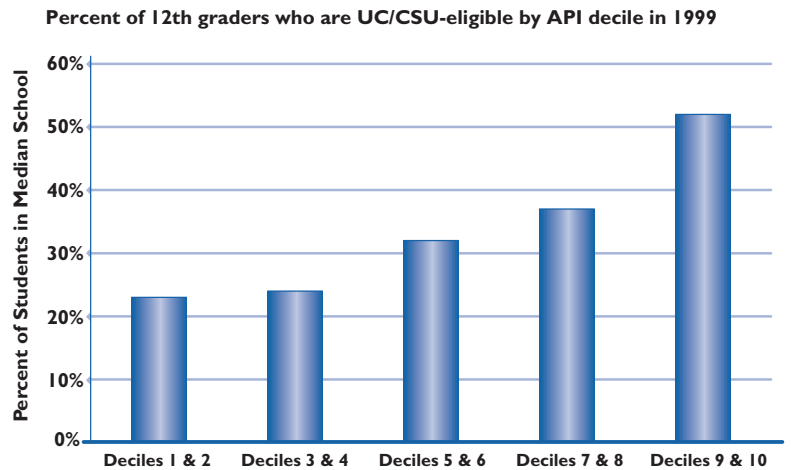
The state also set a starting point for the API indicator at 560. Schools must either score 560 or show improvement, “a much more generous structure” because the API gives schools credit for growth in all subjects and for growth by students at all performance levels, Padia said. The state's ultimate goal of an API score of 800 for every school remains.

Developing a statewide longitudinal data system is key, speakers say

Whether to better understand student achievement, meet federal requirements, or provide teachers with crucial information, speakers at the EdSource Forum said that the state's data system needs improvement and emphasized how unique, confidential student identifiers would contribute to that goal.

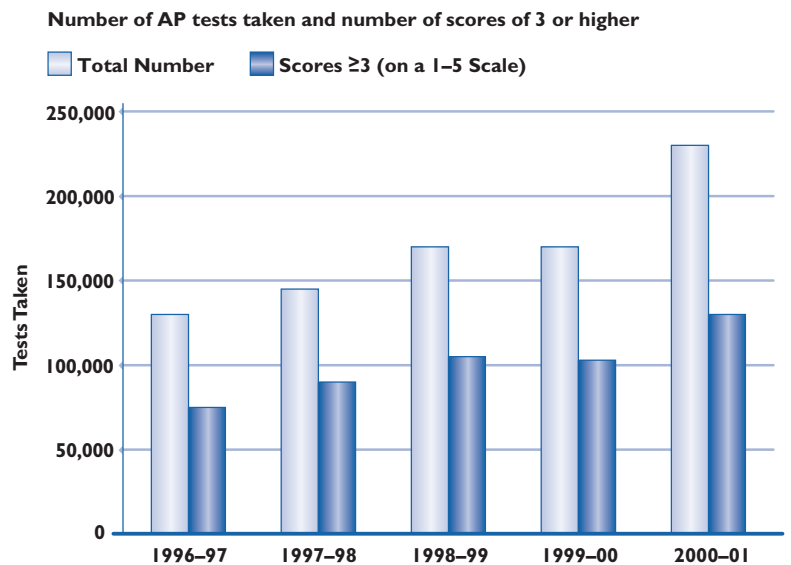
Figure 4 What the data show

Schools with lower API scores prepare fewer students for college, but Advanced Placement (AP) test-taking is on the rise overall



Data: California Department of Education (CDE) API Database

RAND 3/03



Data: CDE, EdSource

RAND 3/03

High schools with higher Academic Performance Index (API) scores tend to graduate more students who meet California university course requirements (often referred to as the “a-g” courses). Statewide the proportion of students who have completed these requirements “has been remarkably consistent over time, at about one third,” said Brian Stecher, senior social scientist at RAND. However, AP test-taking is increasing in California, with most high schools offering AP courses. If students score 3 or better (on a 1–5 scale) on end-of-course AP tests, the students can earn course credit at many colleges.

Presented by Brian Stecher (RAND) at the EdSource Forum in April 2003.

In an opinion survey of the Northern and Southern California audiences before the Forum program began, EdSource asked which of three types of possible new data

on California's education system—a student identifier, a teacher identifier, or school-level financial data—had the most potential to help educators and researchers determine what programs and strategies are working. Of those three types, 52% of the community members, 50% of the teachers, and 47% of administrators and school board members chose the student identifier. A total of 323 people responded to the survey question.

With a unique, confidential student identifier, not only the state but also local schools and classroom teachers could follow students over time to track where they are stumbling and provide support. Better data could help state leaders meet federal requirements under the No Child Left Behind Act and develop accurate information about important questions such as how many students are graduating from high school. Educational researchers would be better able to determine which instructional practices provided the most benefit to students. Senate Bill 1453, when fully implemented in about three years, could go a long way toward meeting this need. Senate Bill 267, if passed, could keep the momentum going.

A decision to invest any more dollars to upgrade California's education data system will be difficult for state leaders to make when they are facing a fiscal crisis as deep as California's. Yet a strong data system is just what state leaders could use today to help determine which cuts would be least harmful to California's schoolchildren. Perhaps an upgraded, more robust statewide data system will make those decisions clearer, if not less painful, in the future.

Additional Resources

To find out how your neighborhood school or district is using its data, contact the school principal or the district superintendent. For additional information, see:

Just for the Kids Analyzes state test data to identify how well individual schools are performing. The national organization also studies the highest-performing schools to find out what works and gives training and tutorials to help others replicate "best practices." www.just4kids.org

California Partnership for Achieving Student Success (Cal-PASS) Creates regional partnerships among K–12 schools, community colleges, and universities in California through the sharing of encrypted and anonymous student transcript and performance information. It uses the data to track performance and improve success from elementary school through university, with the goal of promoting a seamless transition for students. 619/644-7736 or www.gcccd.net/research

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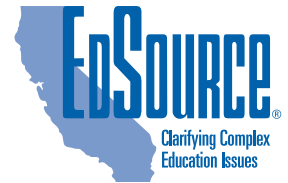
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