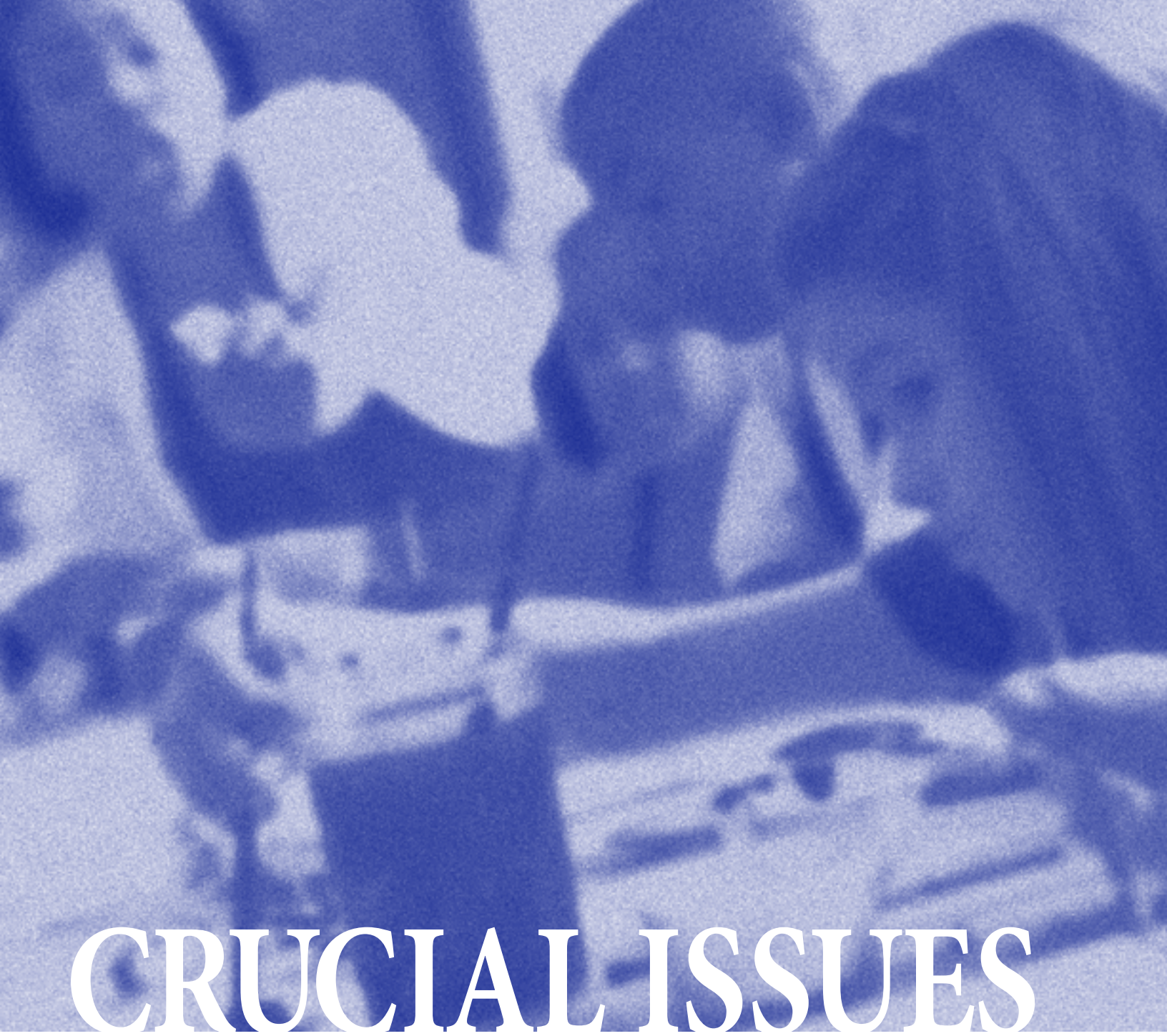


CRUCIAL ISSUES

IN CALIFORNIA EDUCATION 2006: REKINDLING REFORM

PACE
Policy
Analysis for
California
Education

CRUCIAL ISSUES

IN CALIFORNIA EDUCATION 2006: REKINDLING REFORM

PACE
Policy
Analysis for
California
Education

Preface & Acknowledgments

Rekindling Reform — Crucial Issues Facing California's Schools

Educators and policymakers have accomplished much over the past decade, aided by parents and taxpayers. California has set a high bar for what all children are expected to learn, from kindergarten forward. Instructional materials and tests are now closely aligned, so that teachers know how to gauge their students' progress. And achievement growth within thousands of elementary schools has been strong since these accountability tools were forged in 1999.

Yet this is no time to be complacent. Earlier gains in test scores are leveling off in some grades. Achievement gaps between children from poor and middle-class families have failed to narrow. California students continue to learn at slower rates than students in other states, like New York or Texas, where family demographics are similar. We have constructed a high-standards education system, with high-stakes testing for students, but with a finance system that fails to match standards and accountability demands.

Every few years PACE commissions analyses by top scholars of crucial issues facing California's public schools. This 2006 edition comes at a pivotal time. A new legislature is arriving in Sacramento. The governor is starting a four-year term. Next year in Washington, the Congress will review and adjust the *No Child Left Behind Act*. These scholars, after illuminating the problems, put forward a variety of policy options. They are not shy in suggesting how educators might advance improvements locally, as well. Indeed, one crucial issue is whether Sacramento policy makers will continue to centralize authority within the state capital, or whether the capacity of local districts will be advanced.

California can rekindle school reform by building from recent success and squarely facing new challenges. We conclude this volume by suggesting four policy shifts –

- Reorient school accountability and finance to raise the achievement of low-performing students.
- Pursue a coherent strategy for boosting the performance of English learners.
- Make school finance simple, transparent, and adequate for a high-standards public school system.
- Focus the state's role on tracking district and school performance, then deregulate authority over resources down to the school level.

The analyses contained in this volume support two key messages. First, a school reform agenda that fails to close achievement gaps is simply not working. Second, the current policy approach is long on rules and short on resources, an order that's unlikely to motivate long-term gains inside schools.

This volume results from a major effort to better inform California's education debates with empirical evidence and sound analysis. This series of studies, accompanied by seminars with state policymakers, education associations, and leading educators, was cooperatively supported by the William and Flora Hewlett Foundation, Bill and Melinda Gates Foundation, James Irvine Foundation, and Noyce Foundation.

Editorial production of *Crucial Issues* was led by Haleh Hatami, aided by Elisabeth Woody who directed the overall project. Several leading analysts served as reviewers of individual chapters, including Michal Kurlaender, Martin Carnoy, Gloria Rodriguez, John Yun, Heather Rose, and Russ Rumberger. We also want to express deep gratitude to Jennifer Kuhn and Paul Warren at the Legislative Analyst's Office in sharing data. Former PACE Codirector Mike Kirst served as a steady coach and reviewer for the volume. We thank John Mockler and Rick Simpson for their critical feedback. Any errors of omission or interpretation belong to the authors, not our reviewers.

Many thanks to Bob Hass for editing the chapters and to Joanne Klein for her artistic sense and design of the volume. Additional PACE staff played essential roles: Aimee Scribner made sure we were up to date on developments in Sacramento. Doug Kearney provided logistical support. Joseph Wright pulled together data and bird-dogged countless facts. And many thanks to Mike Smith and Kristi Kimball at the Hewlett Foundation for their unflagging support.

Policy Analysis for California Education

Table of Contents

PACE is an independent research center that aims to enrich education policy debates with sound analysis and hard evidence. From preschool, to K-12, to higher education we are dedicated to carefully defining issues and assessing the effectiveness of policies and programs. PACE provides analysis and assistance to California policymakers, educators, and the public, as well as issues of national significance.

Policy Analysis for California Education
University of California Berkeley and Davis
Stanford University
www.pace.berkeley.edu

CHAPTER 1

Rules and Resources : The Evolving Context for School Reform

Haleh Hatami
Policy Analysis for California Education

CALIFORNIA'S TEACHERS AND SCHOOL LEADERS HAVE MADE LONG STRIDES IN RAISING YOUNG CHILDREN'S BASIC SKILLS. THE SHARE OF FOURTH-GRADERS MEETING THE STATE'S DEMANDING PROFICIENCY STANDARD IN MATHEMATICS HAS CLIMBED FROM 36 PERCENT TO 50 PERCENT SINCE SACRAMENTO POLICYMAKERS ENACTED AGGRESSIVE ACCOUNTABILITY REFORMS IN 1999.

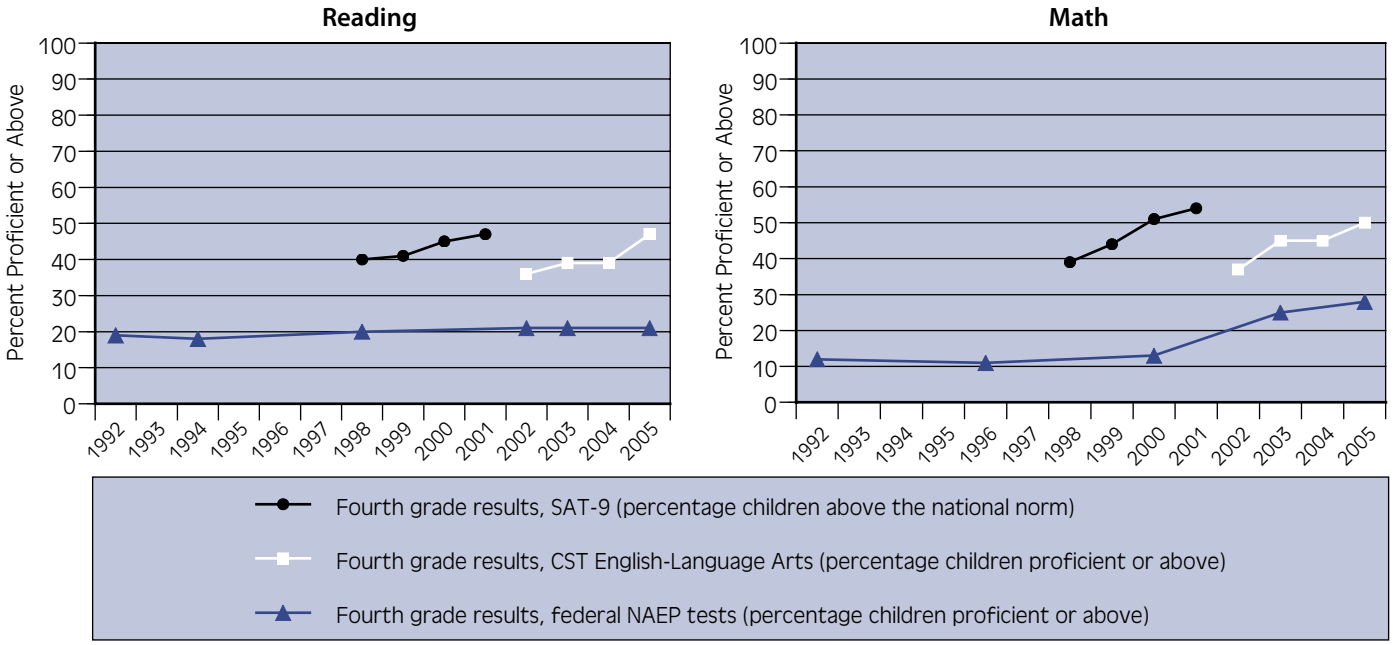
Progress in boosting reading skills has proven more difficult to achieve. Still, tens of thousands of additional students—those in the lower elementary grades—display stronger reading skills than before.

Educators have worked hard to realize these gains—even as California continues to invest less in per pupil funding than other states. The Public Schools Accountability Act (PSAA) of 1999, crafted by former Governor Gray Davis and the Legislature, has delivered clearer learning aims, grade by grade, along with tighter alignment between the intended curriculum and how students are tested. Sacramento has targeted fresh dollars to low performing schools with the goal of closing achievement gaps among diverse students. Policymakers at first offered incentives for schools showing marked progress, although these carrots disappeared as the state's budget deficit worsened. Adding to Sacramento's accountability program, President Bush signed the No Child Left Behind (NCLB) Act in 2002, complicating—some would say undercutting—the state's own efforts.

While making remarkable progress on several fronts, California's reform initiative may be losing steam. Several signs indicate that the initial motivating force of standards-based accountability may be waning. When gauged by the federal standard for proficiency in math and reading, the performance of our elementary school students has largely leveled-off. Figure 1 shows both commendable gains in achievement in past years, along with signs that test scores have climbed up to a plateau.[1]

Classroom teachers have responded to a growing array of new demands and challenges crafted in Sacramento. But significant challenges remain. California is now implementing among the highest curricular standards in the nation, while our schools are propped-up by one of the most rickety school finance systems. We have thousands of young teachers who enter the profession each year, only to leave within five years, often burned out and holding little affection

FIGURE 1: California—Percentage of Fourth-Graders Proficient or Above in Reading and Math, According to State and National Assessment of Educational Progress (NAEP) testing



Source: National Center for Education Statistics

for a rather unprofessional workplace. Almost one-third of all California teenagers never graduate from high school (Greene & Winters, 2006).

Regaining Momentum

We must figure out how to rekindle earlier progress. Californians will back a school system that's showing results and helping to equalize opportunities for its graduates. One first step is to understand what has worked and to scrap policies that are not working. This new edition of *Crucial Issues in California Education* identifies which reforms have proven to be effective and provides guidelines for how we can regain our momentum.

Overall, the chapters in this volume stem from the assumption that we must build from what's working, while being candid about the flagging effects of current school accountability and finance systems.

The chapters that follow, authored by leading researchers with a keen interest in California education, tackle these crucial issues facing educators and policymakers. Pulled together by PACE, these analysts detail the moving parts of California's accountability and finance systems, along with their interplay with the federal government's parallel accountability system, and implications for the state's diverse students.

One crucial issue facing policymakers is whether state and federal policies are thoughtfully balancing rules with resources. A second pressing question is why Sacramento's reform strategy is failing to close achievement gaps, failing to help make our society more just (Figure 2). Much of the reform rhetoric since the late 1990s has emphasized a top-down, tough love approach to schools—that a clearer curriculum, prescribed textbooks, transparent achievement data, and stiff sanctions aimed at local educators would motivate stronger performance.

This strategy has yielded important results. But our contributors question whether rules and punishment alone will continue to motivate local educators. Nurturing growth, a spirit of cooperation, and respect for local context are required as well. This edition of *Crucial Issues* points to how policymakers can rethink their reliance on rules and sanctions, and on the proper balance with providing local educators adequate and aligned resources.

The Evolving Policy Context

Before moving into particular pieces of California's school reform puzzle, this chapter describes the overall landscape, the context and terrain in which improvements to accountability and finance may be pursued. This policy context is ever evolving, with political and popular demand for change often

out-stripping local educators' capacity to carefully implement all that's thrown at them. This context includes four key elements described in this chapter:

- The evolving demographics of California's pluralistic society, one that continues to manifest inequality of opportunity and rising numbers of non-English speaking children.
- The standards-based accountability system that has coalesced since 1999, under the Public Schools Accountability Act (PSAA), complicated by the parallel No Child Left Behind (NCLB) accountability program.
- The unreliable flow of dollars into local schools and how these dollars often fail to reinforce instructional improvements.
- Multiple nodes of public authority and agencies that attempt to govern and improve local schools.

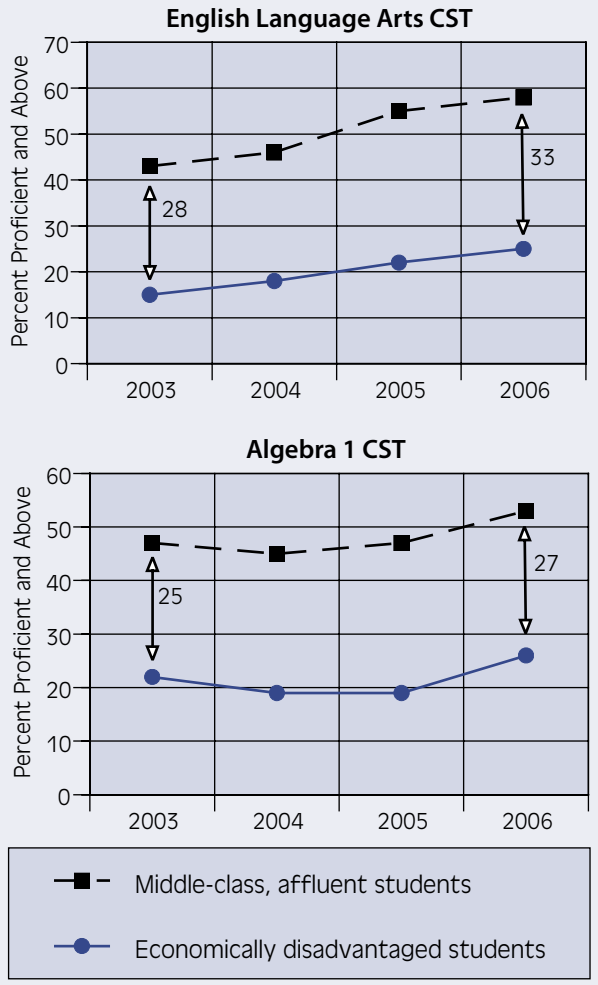
A policy's efficacy in raising the motivation of students or teachers, even raising test scores, must be judged within this often-turbulent context. Future reforms will gain credibility or fade away based on their capacity to fit these surrounding forces and advance improvements locally.

PACE's previous edition of Crucial Issues, released in 2000, asked whether the panoply of reform policies, many enacted the previous year, were fitting together to advance a coherent set of learning aims, implemented within a sensible governance system. Since that time, Sacramento has successfully put in place several of these puzzle pieces, the core elements of an aligned system: clear learning standards, instructional materials that cover standards, and student assessments that match up.

What remains missing from the puzzle are an equally robust and aligned finance system and a clear strategy for improving the everyday workplaces in which teachers labor. Pressing more rules and prescribed pedagogies, alone, may prove to erode motivation inside schools, not enhance it.

Let's start with the evolving context in which contemporary reforms are attempted and new initiatives will be situated. Today's crucial issues in education stem from California's unique history, one that includes remarkable demographic and economic change, along with recurring efforts to improve our schools.

FIGURE 2: 8th Grade Achievement Gap, by Economic Status



Source: California Standardized Testing and Reporting (STAR) Program

THE ORIGINS OF STRONG STATE ACCOUNTABILITY

The challenges faced by our local schools find their roots in a half-century of demographic change and recurring efforts at school reform.[2] The 1960s and 1970s spurred a variety of state initiatives aimed at equalizing the quality of schools serving California's communities, be they rich or poor. In the wake of the civil rights movement, Sacramento created its own Early Childhood Education program (paralleling federal Head Start), the Miller-Unruh reading effort, and a pioneering bilingual education initiative.

The *Serrano* school finance decisions moved the Legislature to achieve equity in per pupil spending by the late 1970s, just as taxpayers revolted against what they saw as climbing levies on their homes and small businesses. The passage of Proposition 13 in 1978 continues to constrain the overall tax base on which public support of its schools depends.

The notion of school reform, until the mid-1980s, centered on equalizing school spending across rich and poor districts (which does not equate with rich and poor communities) and expanding dollars for categorical aid programs.

But national gauges of student progress flattened out in the 1980s, despite the fact that real spending on education had almost tripled since the late 1950s. The national discourse over school reform moved from buying more "inputs" to focusing on how to generate stronger performance from what many saw as an inefficient school system.

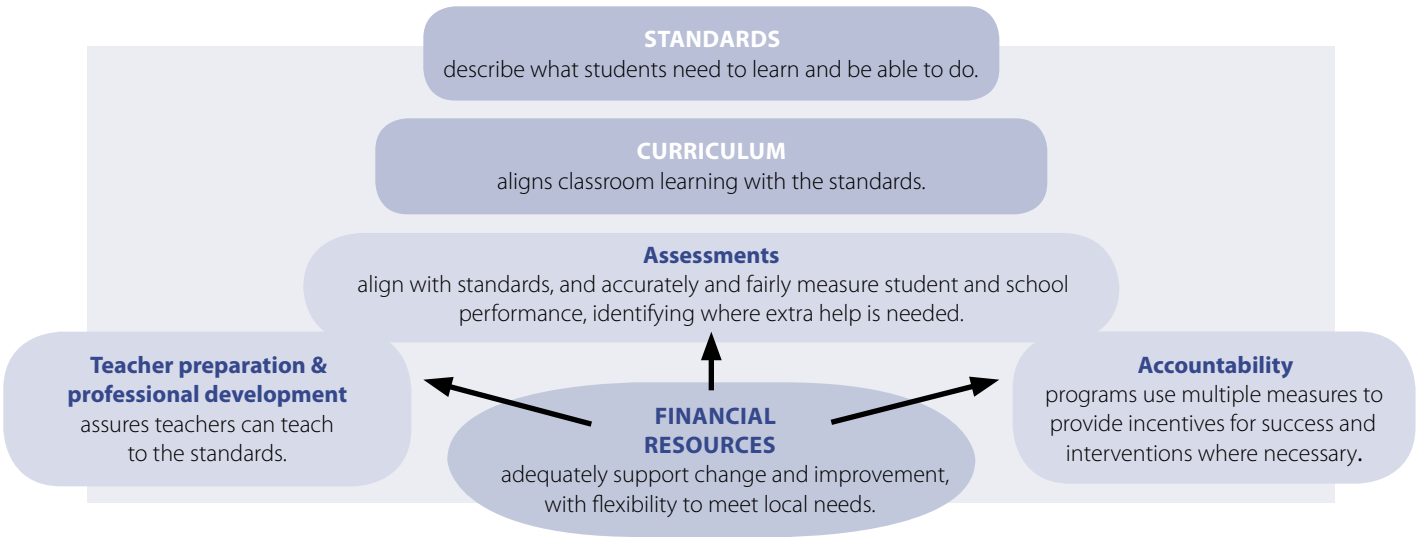
Motivated by the state's dismal results on the 1994 National Assessment of Education Progress (NAEP), policymakers began building on previous accountability efforts. These included the California Assessment Program (CAP) in the 1970s and early '80s, and later the California Learning Assessment System (CLAS), put in place by then state superintendent Bill Honig.

Having placed next to last nationally in NAEP reading scores in 1994 (above Mississippi), California faced formidable challenges. How did our students find themselves at the low end of the performance scale? Analysts have pointed to the state's demographics, falling per pupil spending post-Proposition 13 compared with other states, and the lack of coherent curricular goals. Curricular experiments in math and reading were, according to critics, "…at best a distraction and at worst quite damaging" (Kirst, 2005). And California's English learner population was far outpacing the local schools' capacity to address language acquisition needs. The net effect of these forces was a system in decline.

Two years following California's poor showing on the NAEP, Wilson introduced the Standardized Testing and Reporting System (STAR). Thus began the heavy work of developing rigorous standards in major subject areas for each grade level. Moving toward the ideal of an aligned standards-based system, lawmakers planned for assessments to measure how well students had mastered the standards. Instead, pressure to provide the public with test results led the state to adopt the Sanford 9, an off-the-shelf national test which was not aligned with California's curricular standards. It wasn't until 2001 that the California Standards Test was incorporated into state examinations.

Governor Gray Davis continued to build on the vision of an aligned system. In 1999 the Public Schools Accountability Act was passed which created an academic performance index (API), measuring each

FIGURE 3: The Ideal of an Aligned Standards-Based Education System



Source: EdSource, *Aligning California's Education Reform* (2001)

school's performance and growth, a new intervention program for so-called underperforming schools, monetary rewards for schools meeting growth targets, and a high school exit exam. Davis supported efforts to create high performance standards, beginning in elementary schools, and high stakes for high school students.

The steady centralization of California's school system is now complete. The bulk of funding now comes from Sacramento, not from locally set property taxes (which go to the state to be reallocated to schools); the state sets curricular goals and allows one of two curricular packages in many grade levels; and Sacramento attempts to shape targeted programs aimed at closing achievement gaps. All told, combined centrally controlled state and federal aid amounts to more than 80 percent of funds that schools receive.

Implicit in this tough-love strategy has been distrust in local decision-making, as veteran policy analyst, Michael Kirst, has emphasized. Nor has much attention focused on how to bolster the capacity of local districts in raising student achievement, since local educators, too often, are viewed as part of the problem, not the solution. Then, on top of Sacramento's accountability system now rest Washington's NCLB provisions.

California has set the bar high when it comes to student performance standards. Earlier this year the Fordham Foundation again ranked California's curricular standards among the most rigorous in the country. According to a new survey, 73% of Californians polled believe that high school students should pass a high school exit exam in order to graduate (Baldassare, 2006). So, California has not shied away from raising expectations of all students. The question is whether the intensity of our hopes and rules are matched by the adequacy and efficient use of resources.

Within two years of Governor Davis signing the Public Schools Accountability Act of 1999, the Congress was ironing out the details of what became the most forceful and centralized education initiative ever advanced in the nation's capital. The No Child Left Behind (NCLB) Act created a parallel accountability system—even a separate way of determining which California schools are meritorious or deemed failing. California would be penalized by Washington for a high bar defining student proficiency—since our students now have a much longer staircase to climb before reaching universal proficiency in reading and math by 2013, the deadline set by NCLB.

For the first time ever, not only individual schools, but entire districts are held accountable under federal law. By spring 2006, 152 California districts had fallen under *Program Improvement* status for failing to meet proficiency targets. These districts face federal sanctions. But the long-term question is, what's the state's capacity for large-scale intervention from a fiscal and instructional perspective? Can Sacramento offer a clearer reform strategy than what districts have already devised? Policymakers will be weighing the political implications and technical efficacy of a wide scale intervention across school districts, perhaps involving state takeovers, *reconstituting* the staff of hundreds of schools, or (as encouraged by NCLB) creating many new charter schools.

NCLB has come with significant increases in Title I funding for local schools. But the allocation of these funds is not necessarily linked to performance. Local educators report experiencing harsh sanctions and public embarrassment if their students don't show stronger performance. But when they do, few rewards flow from NCLB. When any student subgroup—defined by family income, ethnicity, or special education status—doesn't meet growth targets, the entire schools is deemed "failing" under NCLB. An earlier PACE analysis showed how this tends to hit racially integrated schools especially hard, since they suffer from a much higher probability of hitting one of the trip-wires, bringing federal sanctions. Segregated schools, in contrast, enjoy lower probabilities of being deemed failing (Novak & Fuller, 2003).

DEMOGRAPHIC SHIFTS

California's public schools educate the largest and most diverse student population in the nation. One quarter of these students are English language learners. The population boom of the 1970s and '80s is over, yet California's student enrollment will continue to grow over the coming decade. As of 2006, California's student population includes 47% Latino students, 31% White, 11% Asian, and 8% Black students. Table 1 and Figure 4 reflect both a 2006 demographic snapshot as well as trends over time.

California has the most diverse student population in the world, with more than100 languages spoken in the homes of those students. Today, our student population is "majority-minority." Forty-one percent of our students speak a language other than English at home, and a quarter of all California public school students are struggling to learn the English language in school.

–State Superintendent of Public Instruction, Jack O'Connell

State of Education Address, February 2006

Both state and federal accountability programs focus on student subgroups that often lag behind, defined by ethnicity, economic status, and special education status. This strategy—requiring schools and districts to track achievement progress by subgroup—has yielded little success in closing achievement gaps. It may have avoided a situation where standards-based accountability best served children of middle-class and affluent families. Still, knowing in greater detail that children from poor or non-English speaking families fall behind others is proving insufficient in closing gaps.

California continues to display one of the highest child poverty rates the country. Chapters 7, 8, and 9 provide a closer look at the state's collective student profile and those policies aimed at serving diverse children. Our authors show that taking the state's demographic context into consideration means going beyond "being aware" to taking an active stance that incorporates their needs into policy.

New analyses show a slowing trend in overall growth statewide. Total enrollment is projected to increase from 6,264,661 students in 2004 to 6,484,243 students in 2014, an increase of 3.5 percent. A downward trend in the enrollment growth level is expected until 2009 when the state's enrollment is projected to grow by about 0.1 percent. Enrollment growth is then expected to slowly increase during the remainder of the projection period (Department of Finance, 2005). A major problem for California, however, is that enrollments are shrinking in several urban districts, yet growing sharply in inner-ring suburbs, the Inland Empire, and parts of the Central Valley. So, Sacramento is faced with essentially reallocating a fixed pie from one district to another. And pressure may build, once enrollments decline, to capture budget savings to reduce the deficit or support other public institutions and programs.

HIGH STANDARDS, HIGH STAKES ACCOUNTABILITY

California policymakers, since 1999, have created high performance standards for local educators and students—then laid down an array of regulations for how schools reach these intended learning outcomes. Many voters and policymakers believe that local educators should be held more strictly accountable for stronger performance, with or without new resources. Others argue that it's unrealistic to expect that teachers and school leaders can meet the high standards and high stakes set by Sacramento without more adequate resources. Either way, future school improvement efforts will be built from the contemporary rules of accountability and the old finance system.

Stiff accountability measures certainly won't go away as long as the performance of California's students remains low, even when compared against other states, like Texas or New York, with similar family demographics. Californians remain dissatisfied with the quality of public education, although many feel good about their own local school (Baldassare, 2006). Despite gains in student scores, California's public education system ranks at the bottom of the nation on a number of indicators (see Table 2– *How California Compares*). Yet previous "lows" in California's education rankings, as we chronicled in *Crucial Issues 2000*, have fueled innovative reforms, including the current "results-based" accountability system. When

TABLE 1: The Numbers – From *Quality Counts, 2006* (EdWeek)

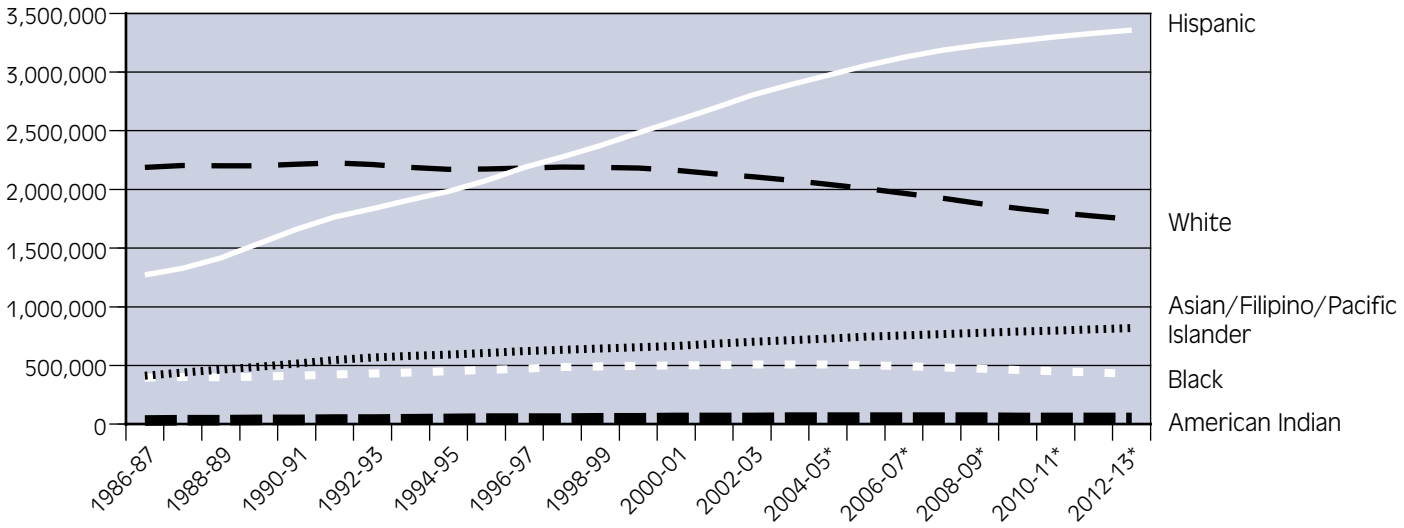
Public Schools	9,222	Children in Poverty	19%
Public School Teachers	304,311	Minority Students	65%
Students (PreK – 12)	6,413,862	Students With Disabilities	10.6%
Annual PreK – 12 Expenditures	$48 bill.	English Language Learners	24.9%
Projected growth of students next 10 years		25,000	

RAND analysts recently ranked states according to student achievement levels, taking into account the social-class and language backgrounds of students, California ranked dead last. Other states with student profiles similar to California show much higher performance levels.

The tandem accountability programs—Sacramento's PSAA and Washington's NCLB—define the landscape in which future reforms must be situated and pose various challenges for policymakers –

- *High standards* – Sacramento has banked on the admirable goals of pushing all students to meet high standards, while struggling for an effective initiative to close achievement gaps. However, high fixed proficiency targets as defined by NCLB provisions, may simply dash the hopes of educators and students if capacity locally remains constrained by inadequate resources.
- *Curriculum and instruction* – After devising demanding learning aims and curricular standards, Sacramento has mandated two acceptable curricular programs in elementary reading. This advances the tight alignment of standards and classroom materials, while narrowing the discretion of local school boards and teachers.
- *The California high school exit exam (CAHSEE)* – This high-stakes capstone to California's accountability system is proving controversial. Accountability only works if consequences are felt locally. But should students, primarily from low-income families, feel the brunt of the consequences, after receiving 12 years of low-quality schooling? The public heavily favors the exit exam, while it is receiving mixed reviews in the courts.[3]
- *Intervention system* – The state's interventions for low-performing schools show disappointing results for many schools. For the first time ever, entire districts face consequences under NCLB. Districts are increasingly sharing a role in intervention.
- *Academic Performance Index* (API) – State and federal accountability systems yield different results. To date, one thousand California schools are meeting Sacramento's growth standards, but are deemed failing by Washington. This creates confusion for parents and policymakers alike. Last year the Bush Administration announced that it would allow states to track and reward growth in student performance. But the state department of education lacks the technical capacity and data system to follow children over time, necessary to tracking achievement growth.

FIGURE 4: California Public K-12 Enrollment*



Source: California Department of Finance

* Multiple race and nonresponses are allocated to the known categories. Actual school enrollment through 2002-03 was provided by the California Department of Education, California Basic Educational Data System, and projected enrollment, by the Department of Finance, Demographic Research Unit. California Youth Authority and State Special Schools are excluded.

California's accountability system has witnessed positive outcomes on two fronts. As we mentioned earlier, on the whole, student performance on state tests has been steadily rising, at least in the early elementary grades. Also, what is being tested is better aligned with what's being taught (state curricular standards). Researchers, though, are beginning to ask questions about the plateau in test scores and what this spells for the model's sustainability. Chapter 4 will delve into results-based accountability and the assumptions behind the current model, and Chapter 3 will address how different funding approaches can assess cost implications. Chapter 5 offers a focused look at school spending and improvement efforts in low-performing schools.

UNSTABLE AND INADEQUATE SCHOOL FINANCING

The state's method for financing schools is based on a maze of funding channels and represents an accretion of three generations of court decisions, ballot propositions, and the pursuit of silver bullets for school reform. School finance in California now depends on unstable state revenue sources, like capital gains taxes which have fluctuated over the past 15 years.

So, as local educators' feet are being held to fire that grows hotter, they must work with revenues that have become unstable. This is a non-system that only a few insiders understand and which surely erodes the morale of local school boards, principals, and classroom teachers.

When the California economy recently declined, with taxes from capital gains going into a temporary tailspin, Governor Davis was forced in 2002 to cut teacher training efforts, eliminate all incentive payments to schools and teachers whose students showed performance gains, and to scale back the state's targeted initiative to raise the performance of low-performing schools. An accountability program that began with a mix carrots and sticks suddenly lost its positive incentives.

Arnold Schwarzenegger ran in 2003 on a platform of fiscal conservatism and budget reform. His fiscal philosophy created animosity among education advocates when he suspended the Proposition 98 funding guarantee for the schools to narrow the 2004-05 budget deficit (see Chapter 2). He promised lawmakers to make it up the next year, but reneged on the promise. Adding salt to the wound, he backed Proposition 76 in 2005 that would give him the power to make "across the board" cuts in state spending when there is a budget deficit, including cuts to Proposition 98 guarantees. Voters rejected it and every other ballot measure that appeared on that special election slate.

By early 2006 the economic skies had cleared somewhat. Capital gains taxes were up, along with state income tax revenues. This unexpected windfall added $7.5 billion to the state general fund, allowing the governor to boost K-12 spending by more than 11 percent in the current fiscal year. Schwarzenegger also settled a court challenge over his ignoring the Prop 98 funding guarantee, agreeing to spend $2.9 billion over the next several years, tentatively set to reduce class sizes in the upper elementary and middle-school grades. The new budget also increases funding to vocational education, arts, and physical education, in a move to counter the state accountability system which has been criticized for narrowing curricular focus by testing demands.

TABLE 2: How California Compares

1st	in nation, student population, 2005. California has 35% more students than US average.
1st	in nation, English learner population, 2004
43rd	in nation on NAEP Proficiency, 2005 (*National Assessment of Educational Progress*, ranking reflects scores 4th and 8th grade math and reading) (EdWeek)
29th	in nation graduation rate, 2002 (using Cumulative Promotion index)*
31st	in nation, per pupil spending, 2001-02 (latest statistics)

* Editorial Projects in Education (EPE) Research reports 71% graduation rate, state reports that 87% of students are graduating, Manhattan Institute reports 65% in 2003. See Chapter 6 for challenges in accurate calculation.
Source: National Education Association, *Rankings and Estimates,* 2004-05

Despite the funding reprieve, in 2006, the state's economy is still trying to catch up to the population booms and economic changes of the last thirty years. California still faces a $3 to $4 billion structural deficit, where spending obligations outstrip anticipated revenues.

A major class action suit settled in 2004 drew public attention to the disparity between funding and demands for high achievement. *Williams v. State of California* raised questions about how the state could hold schools accountable to high standards without providing *adequate* inputs to support schools in reaching proficiency goals. Plaintiffs from 18 school districts argued that lack of basic resources like sound facilities, sufficient materials, and qualified teachers, left students in low-income schools at an unfair disadvantage. *Williams* serves as a reminder that new policies aimed at improving student achievement must consider the context in which learning takes place.

The *Williams* settlement is not a structural remedy to the school finance system. To understand "how much is adequate," researchers and policymakers are looking more closely at factors that affect learning. In an unprecedented effort, a large-scale research project commissioned by four major foundations, will attempt to clarify the "parts" of California's school finance system.[4] The "Getting Down to the Facts" investigation is tracking the relationship between money, efficiency, and student performance in California. These studies are due out in early 2007, sponsored by the Governor's Advisory Committee on Education Excellence.

Californians, still worried about the state of the public schools, are willing to pay some new taxes. They are less likely to approve increases in property tax (24%) or sales tax (36%). But they were more likely to accept income tax increase on the state's highest earners (64%). All told, however, a vast majority (81%) prefer more efficient use of existing funds to higher taxes to improve the schools (Baldassare, 2006).

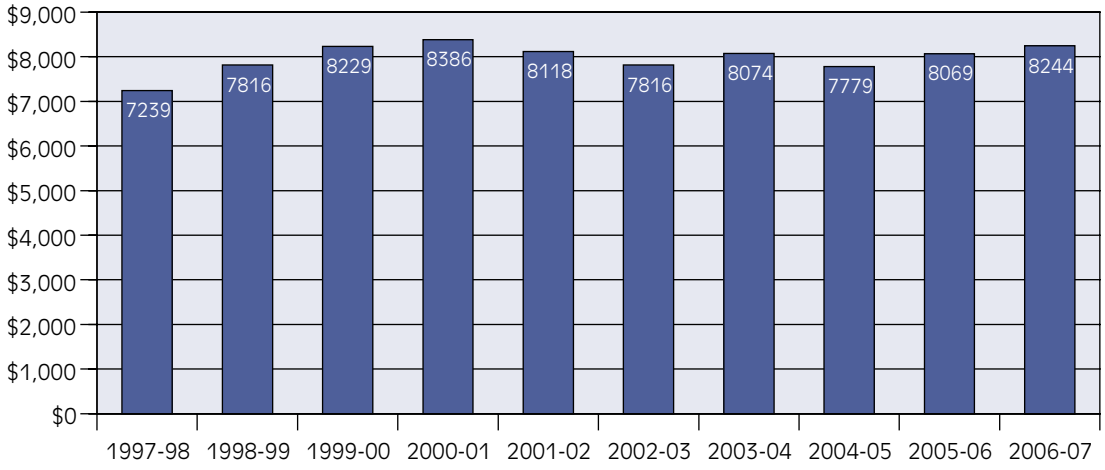
GOVERNANCE

Finally, the evolving context of governance plays a central role in policy development and implementation. The combined state and federal "results-based" school accountability systems place most decisions far from the schoolhouse. The state, strapped with more regulatory power than it has the capacity to enforce, seeks ways to share the burden with districts. Policymakers are faced with a persistent governance dilemma—balancing oversight with trust in local decision-making.

The Center on Education Policy lists the ways in which the arms of the federal law radically alter governance dynamics:

> NCLB affects a range of state and local decisions, both small and large—when and how students take tests, which textbook series districts adopt, which children receive extra attention and how they are grouped, how states and districts spend their own money, how teachers are trained, and

FIGURE 5: California Expenditures Per K-12 Pupil (ADA)



Source: Legislative Analyst's Office, September 2006. Values are adjusted to 2006-07 dollars

Only one in eight Californians (12%) say they trust state government the most to make spending decisions for local schools. Residents see a host of local authorities—their local school district (36%), teachers (30%), and principals (13%)—as more trustworthy. (Baldassare, 2006)

where principals and teachers are assigned to work, to cite just some examples (CEP, 2005).

The way California finances its schools remains unrelated to the standards and accountability system. Outside of intervention funds, how a school meets, or fails to meet, standards (measured by proficiency targets for the school and for subgroups within the school), has little connection to how that school receives funds. This fundamental discord makes for conflict in governance at best, inefficiencies and negative student outcomes at worst. Faced with NCLB pressures for specific outcomes within a fixed timeframe, local discretion continues to shrink. Added to this, the school finance system is equally if not more restrictive, leaving local governing bodies little funding flexibility. In the positive column, however, accountability pressures from above have produced more candid talk at the local level about how individual students and groups of students perform, leading to greater collaboration and strategic targeting among many educators.

State-driven accountability, in theory, does not preempt local control over schools. The systems envisioned by PSAA and NCLB were intended as monitoring and motivational mechanisms for educational quality. In theory, outcomes (test scores and subsequent sanctions or rewards) would motivate schools to improve, but approaches to improvement would be left up to local control. The same theory held for entire districts as they became accountable under NCLB (see Chapter 4 for further discussion).

In practice, though, schools and districts argue that the system ties their hands. Both districts and schools seek more flexibility in how they use funds and instruction to meet the specific needs of their students. Educators point to district use of uniform curricula, and pacing schedules at the elementary level in particular, as a way that the "how" of teaching and learning is being determined by state policy, not local context.

At a time when more and more of the "what and how" of teaching is decided at the state and federal house, teachers are being required to adjust. Many find little room for innovation and creativity, workplace qualities that drew them to a career in teaching. Local context, resources, and their own preparation, determine how educators respond to accountability rules. How can policies support improvement without limiting creativity? Voices from the classroom, including the expertise of the California Teacher Advisory Council (CALTAC), offer insight into the ways policy affects instruction, teacher preparation to serve the needs of language learners and low-income students, as well as workplace conditions (see Chapters 7 and 8 for further discussion).

As entire districts are now being held accountable, the state walks the line between the need to intervene and the need for local solutions. How can the state build district capacity to improve schools, so that it can itself build its schools' capacities, and ultimately, meet the immediate needs of failing students? Successful district practice holds promising answers to these questions, and more research is needed on how effective districts operate.

Decisions at the district level have the potential to leverage large-scale improvement. The new *District Collaborative* initiative, funded by several private foundations and coordinated by the American Institutes for Research with PACE involvement, hopes to uncover and disseminate what works in districts across the state. A new PACE report details how three diverse districts are effectively closing achievement gaps, crafting quite different strategies (Woody, et al., 2006).

In the debate over governance and whose rules count, we ask policymakers, as we did in 2000, whether it's time for a break. Regulation implies law, and the solution to imperfect rules often means more rules. How can "more rules" be designed and piloted so that they are less onerous to local actors? California's education system has a strong foundation built through bipartisanship. Efforts to tackle the state's pressing education issues are unfolding through the work of two education commissions appointed in 2005. Each committee includes representatives of California's multiple governance bodies as well as researchers, parents, business and community stakeholders. As with the California Master Plan for Education committees,

it is hoped that by convening a myriad of policy "players" and stakeholders, clarity, transparency, and more efficient and just policy will result.

WHAT'S INSIDE CRUCIAL ISSUES 2006

Crucial Issues 2006 delves into a range of issues, most pertaining to how we might rethink and improve school accountability and finance systems. These problems are situated in California's evolving demographic, economic, and policy contexts, as I have just detailed. From this framing, you may read the volume sequentially. Or, you may select the chapters that best fit your own interests. The volume is designed so that each contributor's chapter stands on its own.

We often hear from veteran policymakers that history matters and is too often ignored in the race to fix the state's education challenges. In this book we take a look at conditions prior to 2000, keeping the state's political-economy in mind, noting progress, and highlighting policy leverage points. Topics concerning teachers and teaching, curriculum, school choice, professional development, and governance fall under the volume's broader framework of "rules and resources" and appear across the chapters.

Our intent is to capture the debate for an audience interested not only in the education issues but the policy play that shapes how issues develop, succeed, fail, and affect future direction. The policy recommendations under each issue are rooted in a historical and structural foundation. To the extent possible, we look at how the rhetoric from the state, the academy, and the community play out at the classroom level.

Each chapter will address the following:

- What are the historical, persisting issues and how have policymakers tried to address them in the past?
- What are the most pressing issues currently and what do we know about their dimensions empirically, and alternative policy remedies?
- How to address these perennial issues in the long run, more structural long-term remedies?

Layers of Governance in California Education Policy

The **State Board of Education** is directed "to study the educational conditions and needs of the state" and to "make public plans for the improvement of the administration and efficiency of the public schools of the state." In designing the State Board of Education, the legislature intended to make the Board the ultimate governing and policy making body for the Department of Education, its officers and employees.

The **Superintendent of Public Instruction** is an elected constitutional officer whose responsibility is to superintend the schools of the state. The Superintendent is also responsible for implementing Board policies.

The **State Department of Education** is responsible for administering and enforcing the laws pertaining to education in the state. The CDE also houses, analyzes, and reports on education data. Like other state agencies, the CDE is dependent upon the legislature and the governor for its budget.

One consequence of heightened gubernatorial interest has been establishment of the office of **Secretary of Education** by Governor Wilson in 1991. Prior governors had education advisors, but the creation of a cabinet level position indicated a new, more visible and central role for the governor in education.

Legislature: Controls school funding in California and passes laws on an array of school policy.

County offices of education: Operate schools, juvenile halls, regional occupation centers providing job-related training, special education classes and schools for handicapped students, and environmental education schools. In addition, county offices provide administrative and supportive services to small local school districts (per *State Guide to Government*).

City Government: In some cases city governments have jurisdiction over local schools. Recent debate over Los Angeles Mayor Antonio Villaraigosa's attempt to gain control of the local schools revived the contention over who should control classroom curriculum and accountability practices.

LEA: Local Education Agency. The local school authority. For example, a school district's administration and board of education.

School Site: Run by principal (site leader) and school site councils.

Source: Timar (2002)

Governor's Advisory Committee on Education Excellence

The committee will focus on four issues:

- The distribution and adequacy of education funding;
- The functioning and effectiveness of governance structures;
- Teacher recruitment and training; and,
- The preparation and retention of school administrators.

Source: Office of the Governor

P–16 Council

State Superintendent Jack O'Connell formed a 52-member action group covering preschool to higher education to:

- Improve student achievement at all grade levels, including eliminating the K–12 achievement gap;
- Link all education levels, from preschool through higher education, to create a comprehensive, seamless system of student learning;
- Ensure all students have access to caring and qualified teachers; and,
- Increase public awareness of the link between an educated citizenry and a healthy economy.

Source: California Department of Education

CHAPTER SUMMARIES

CHAPTER 2, *Funding California's Schools, Part I: Past, Present, and Future?,* lays out the complex components of and past fixes to the state's education finance system. According to national reports, California consistently ranks low in its effort to fund schools. The author reveals what state-to-state comparisons measure, how much California spends on its schools, and what it buys. A history of the state's school finance in recent years focuses on issues of equity, productivity and adequacy and how the *Williams* case fits in, setting the context for the debates over adequacy in the subsequent *Funding California's Schools, Part II*.

CHAPTER 3, *Funding California's Schools, Part II: Resource Adequacy and Efficiency,* explores the broad and complex question of "how much" we need to spend to get the achievement results we want. How do we align dollars to Sacramento's learning standards? The *Williams* Settlement established the state's responsibility for providing minimal levels of qualified teachers, facilities, and textbooks. But what must be spent to offer truly sufficient opportunities to learn? How much is "adequate"? The authors sketch the implications and challenges put forth by the adequacy movement for the state of California, describing different approaches to defining adequacy and how each addresses common problems in traditional school funding systems. Adequacy studies, they argue, move beyond offering a single figure or formula. They clarify the tangled strands of money flow and governance and offer policy options.

CHAPTER 4, *California's Accountability System,* outlines several key issues confronting the state as it continues to refine its school improvement initiatives. As accountability in California encompasses a wide range of reforms at the federal, state, and local levels, this chapter focuses primarily on the evolution of the state accountability system and its current interaction with the federal NCLB. The overlap of the two systems, and the lack of promising findings on the benefits of intervention programs like II/USP, forces California to rethink its accountability system. Authors show how the "theory" plays out in practice and offer concrete recommendations at a time when policymakers have a window of opportunity to negotiate positive changes to the current model.

CHAPTER 5, *Evaluating State Intervention: The High Priority Schools Grant Program,* examines state efforts to improve instruction in the lowest performing schools—those receiving HPSGP funds. The chapter assesses past strategies to address the problems of persistent low achievement in schools, a problem that is most acute among schools that serve large numbers of non-English-speaking, minority students from disadvantaged socio-economic backgrounds. It then discusses preliminary findings from an ongoing study of schools in the HPSG program. The paper identifies some of the strengths and weaknesses in the program and makes recommendations for its improvement.

CHAPTER 6, *Achievement and Attainment: The Comprehensive High School and the Problem of Reform,* questions how we frame the current "crisis" in our high schools. What makes high schools so different and high school reform so difficult? The problem, the author argues, is an inconsistency of a different kind: for the first time in the history of the American high school, the aspirations of the public (more students

The Birth of a Reform: Lessons from Class Size Reduction

The story of California's "class size reduction" in the late 1990's offers a valuable lesson on policy in practice. Budget surplus in the late 1990s allowed sweeping changes to class size, creating a ripple effect across the state's education infrastructure. Senate Bill 1777, under Governor Pete Wilson, legislated class size reduction (CSR) in K-3 classrooms statewide. Six years ago, *Crucial Issues in California Education 2000* predicted the impact. While hailed as one of the most popular policies in years, the effects of CSR on student achievement was inconclusive by 2002.* With the increase in the number of classrooms, schools required a massive infusion of teachers at grades K-3. The number of uncredentialed teachers rose 10.7 percent in the second year of implementation.

The rulemaking implications of CSR's rapid implementation resound today. The policy "lessons learned" can be applied to current efforts to reform California's schools through the standards and accountability system, including:

- Analysis of state capacity to support statewide reform must take place prior to implementation.
- Sustainability of reform depends on a predictable and efficient flow of financial and human resources. What we have learned about the state's intervention in low-performing schools illustrates the unsustainable nature of high-cost/short-term initiatives (Chapters 4 and 5).
- Implementation varies with demographic context. Schools with a majority of high- poverty and English Learner students had less success in implementing improvement plans.

* CSR Research Consortium, (2002).

wanting higher levels of education) are in increasingly direct conflict with the expectations of the policy system (higher standards and test scores). This is a new set of demands for high schools—something they were not designed to do: to educate all young people through to graduation, to ensure that they all take rigorous courses and are prepared for college.

The final three chapters of *Crucial Issues 2006* look at the ways accountability and finance interact with California's specific demographic context, with a focus on language, poverty, and early intervention.

CHAPTER 7, *Crucial Issues in Preparing Teachers of English Learners,* makes the case for recruiting more and better-prepared teachers with specialized skills for teaching English learners (ELs)—students whose first language is not English, and who are not yet English proficient. California has the highest concentration of ELs in the nation and the numbers continue to grow. The authors review and critique current approaches to preparing teachers to meet the academic needs of these students. They report on what teachers themselves said in a statewide survey about their current level of preparation and professional development. Among other urgent concerns for this population: without effective instruction, many ELs will fail the high school exit exam and fail to graduate.

CHAPTER 8, *Addressing the Needs of Low-Income Students,* while recognizing recent state and federal policy attention on our most economically challenged students, points to a persistent achievement gap. The socio-economic implications of these disparities include diminishing school participation, fewer high school graduates, and a less-educated work force. Authors tease out the link between poverty and achievement and policies aimed at compensating for economic disadvantage. Included in these fixes are programs like federal Title I funding. Finally, authors turn to the classroom and examine research on school and classroom strategies for addressing the needs of students in California's low-income communities.

CHAPTER 9, *Expanding and Improving Preschool,* brings the book to its conclusion—at the earliest stages of schooling. Research has shown that gaps in learning appear between different groups of children in their early language and cognitive development prior to entering kindergarten. This gap does not close, and in fact, widens for some over 12 years of public schooling. One strategy for improving school readiness and reducing initial achievement differences among children is increasing access to preschool. Yet poor and minority children are less likely to participate in preschool, which may contribute to the education achievement gap. This may be particularly problematic in California because of its large and

growing minority population. Authors present policy considerations, including fiscal and governance implications, of legislating universal preschool.

CHAPTER 10, *Rekindling Reform,* closes the book with a four-point agenda for tackling the most crucial question facing the California schools: whether the current state reform strategy will sustain achievement growth in the elementary grades, close gaps, and show improvements at the high school level. Concluding thoughts on future policies include addressing the pressing tasks of retooling school finance and offering a more motivating approach to school accountability.

ENDNOTES

[1] Analysts from the National Center for Research on Evaluation, Standards, and Student Testing (CRESST/UCLA), comparing 2006 against earlier years, concluded that "the longer an accountability system is in place, the smaller the gains. California may have reached that plateau." PACE's own analysis of test score trends across 12 states, including California, similarly found that while state officials continue to report gains on their own tests, federal results from the National Assessment of Educational Progress (NAEP) show flattening trend lines since 2001 at the fourth and eighth grade.

[2] This section draws from *Recent Evolution of California's Accountability Policy,* by Michael W. Kirst (2005).

[3] Alameda County Superior Court judge ruled the exit exam unconstitutional in May 2005. In June, at State Superintendent's request, the State Supreme Court overturned the ruling. Valenzuela vs. O'Connell has gone to the state Court of Appeal. As of press time, 12% of high school seniors failed the CAHSEE.

[4] The William and Flora Hewlett Foundation, The Bill and Melinda Gates Foundation, The James Irvine Foundation, and the Stuart Foundation.

REFERENCES

Baldassare, M. (2006). *PPIC statewide survey: Special survey on education*. San Francisco, CA: Public Policy Institute of California.

Baldassare, M., & Hanak, E. (2005), *CA 2025 It's Your Choice*, PPIC. San Francisco, CA: Public Policy Institute of California.

Bohrnstedt, G. W., & Stecher, B. M. (Eds.), CSR Research Consortium. (2002). *Capstone report: What we have learned about class size reduction in California.* Sacramento: California Department of Education.

Cain, B. E., & Kousser, T. (2004). *Have term limits affected the California Legislature*? PPIC Research Brief, 94. San Francisco, CA: Public Policy Institute of California.

Carroll, S.J., Krop, C., Arkes, J., Morrison, P.A., & Flanagan, A. (2005). *California's K-12 public schools: How are they doing?* Santa Monica, CA: RAND.

Center on Education Policy, (March 2005). *From the capitol to the classroom: Year 4 of the national No Child Left Behind Act*.

Fuller, B., Gesicki, K., Kang, E., & Wright, J. (2006). *Is the No Child Left Behind Act working? The reliability of how states track achievement.* PACE Working Paper Series No. 06-1. Berkeley, CA: Policy Analysis for California Education (PACE).

Goldschmidt, P, Boscardin, C . K., & Linn, R. (2006). *CRESST analysis of California accountability progress report*. National Center for Research on Evaluation, Standards, and Student Testing (CRESST).

Greene, J., & Winters, M. (2006). *Leaving boys behind: Public high school graduation rates.* Civic Report No. 48. New York, NY: Manhattan Institute for Policy Research.

Kirst, M.W. (March 2005). *Recent evolution of California's accountability policy*, paper for PACE Legislative Seminar.

Novak, J., & Fuller, B. (2003). *Penalizing diverse schools?* PACE Policy Brief. Berkeley, CA: Policy Analysis for California Education (PACE).

Policy Analysis for California Education, *Crucial issues in California Education 2000: Are the reform pieces fitting together?* Berkeley, CA: Policy Analysis for California Education (PACE).

State of California. Department of Finance. *California public K-12 enrollment and high school graduate projections by county, 2005 series.* Sacramento, CA. Updated December 2005.

Timar, T. (2002). *You can't always get what you want: School governance in California*. Williams Watch Series: Investigating the Claims of Williams v. State of California. (University of California, Los Angeles), 65.

Venezia, A., et al. (2005). *The governance divide: A report on a four-state study on improving college readiness and success.* San Jose, CA: The National Center for Public Policy and Higher Education.

Woody, E., Bae, S., Park, S., & Russell, J. (2006). *Snapshots of reform: District efforts to raise student achievement across diverse communities*. Berkeley, CA: Policy Analysis for California Education (PACE).

CHAPTER 2

Funding California's Schools, Part I: Past, Present, and Future?

Lawrence O. Picus
University of Southern California
Rossier School of Education

THE 2006-07 BUDGET ACT SIGNED BY GOVERNOR ARNOLD SCHWARZENEGGER INCLUDES $48 BILLION IN FUNDING FOR K-12 EDUCATION. ACCORDING TO THE DEPARTMENT OF FINANCE (2006), THIS AMOUNTS TO $11,264 FOR EACH STUDENT IN AVERAGE DAILY ATTENDANCE (ADA) ACROSS THE STATE, WHEN INCLUDING FEDERAL, LOCAL, AND OTHER SOURCES. STATE FUNDING IS THE PRIMARY MECHANISM FOR DISTRIBUTING REVENUES TO LOCAL SCHOOL DISTRICTS. The magnitude of both the total commitment and the per pupil level of resources devoted to the education of our State's school children is substantial. Despite this, there is a general feeling across the state that funding levels for K–12 education are too low, especially considering that California's schools include the largest and most diverse student population among the 50 states. Regardless of the level of funding, there is also a growing concern that California's system of school finance is increasingly complex and disjointed.

Because California has over six million school age children attending public schools, any decisions about the level or type of funding for schools has major implications for the funding of other governmental services, as well as for the level of taxation needed to fund schools for those children. Before making these hard choices, it is helpful to consider how California compares to the rest of the nation in school funding, to review how our state found itself in the current funding predicament, and to consider what options are available to policymakers wrestling with this issue.

To accomplish that, this chapter is divided into three sections. The first describes how California compares to other states in funding its schools, focusing on both the fiscal resources available to schools, and on the resources those dollars are able to purchase in the California economy. The second section briefly traces the history of California school finance in recent years, focusing on issues of equity, productivity, and adequacy. Finally, the third section of this chapter discusses the major policy issues facing the state today as it struggles to balance its budget, provide services to all deserving California residents, and meet the future educational needs of our school children.

CALIFORNIA SCHOOL FINANCE: HOW DO WE COMPARE?

Comparing school finance systems across states is a complex undertaking. Under our Federal system of government, each state is responsible for education, and each has developed its own, unique approach to funding public schools. The result is that it is hard to make direct comparisons across the 50 states. There are three ways to approach the question: 1) How much do we spend? 2) What resources do the dollars buy? 3) How hard are we trying? Each is considered below.

How Much Do We Spend on Education?

When considering school funding issues, it is helpful to understand the relative size of the public education sector in the United States. Table 1 compares estimated K–12 pubic education expenditures for 2005–06 with some of the Fortune 500 companies to help put this into perspective. As the table shows, total K–12 expenditures for that year are estimated to be $415.3 billion or approximately 22% more than the $339.9 billion in revenue earned by the number one company on the Fortune 500 list, Exxon-Mobile. Moreover, the nearly $60 billion in revenue that year for California's K–12 schools was more than that of State Farm Insurance, Company, the 22nd largest company on the Fortune 500. Table 1 also includes as estimate of the revenue received in 2005–06 by the Los Angeles Unified School District (LAUSD)—the largest district in California and the second largest in the United States. With revenue of $8.2 billion, that district compares favorably with Reynolds American ($8.3 billion), which would rank it number 280 among Fortune 500 companies.

TABLE 1: Education and the Fortune 500

Rank	Organization	2005-06 Revenue or Expenditures ($ Billion)
	U.S. Public K–12 Ed.	415.3**
1	Wal-Mart	339.9
	Calif. Public K–12 Ed.	59.6*
19	State Farm Insurance	59.2
	LAUSD	8.2*
280	Reynolds American	8.3

*All Funds
**Expenditures

In terms of total dollars allocated to K–12 Education, California ranks at the top of all states in the nation. This is simply a result of our size—more than 6 million of the nation's 48 million plus school children reside in California. On a per pupil basis, however, our spending is somewhat below the national average. In 2003–04, according to the National Education Association (NEA, 2005), California's per pupil spending was $7,584 per pupil, approximately 92% of the national average of $8,248. That year our spending was the 29th highest in the nation. Although this is important information and places our state's spending in context, perhaps more important is what we purchase with those dollars.

What Do We Buy?

The single largest expenditure for any school system is for personnel, and the largest single expenditure for personnel is for teachers. In fact, according to the NEA (2005), the average salary of California teachers in 2003–04 was $56,444, the second highest in the nation. Even when adjusted for California's relatively high cost of living, California's teacher salaries still ranked near the top of the states. This fact signifies recognition among Californians of the importance of teachers to educational achievement. However, because overall per pupil spending is relatively low, California also has the third highest pupil-teacher ratio in the nation. Only Utah and Arizona had higher pupil teacher ratios in 2003–4.

Another way to look at what we buy in California is to compare staffing patterns to those in other states. Table 2 displays the number of staff per 1,000 pupils by staffing category and compares it to average staffing patterns for the entire country. The table clearly shows that for all staff categories, California's school children receive substantially less support than children in most other states. There are only 90.0 total staff per 1,000 students in California compared to the United States average of 123.0 staff per 1,000 students. The number of teachers per 1,000 students at 48.3 is only 77% of the national average of 63.1, and our ratio of counselors and librarians per 1,000 students is a fraction of the national average. Regardless of the staffing category considered, California's children

have access to fewer adults each day at school than do children in almost every other state in the nation.

How Hard Do We Try?

The third way to compare California school spending to the rest of the United States is to look at the level of effort in terms of public expenditures we focus on K–12 education. California's personal income per capita (a measure of our overall wealth) was $32,845 in 2002, some 6.6% above the national average. That suggests we have the capacity to spend more than average for public services in our state. And in fact we do. According to the NEA's analysis of Census data and data from the Bureau of Economic Analysis, California's state and local government expenditures per $1,000 of personal income in 2001–02 (the most recent year for which data is available) amounted to $205, or $10 more per 1,000 of personal income than the United States average of $195. Looked at another way, California spent $6,732 per capita for state and local governments in 2001–02 compared to the national average of $6,010—some 12% more than the national average.

But, despite the fact that we make a greater than average effort, a higher proportion of California residents are school-age children—27% compared to the national average of 25.3% (EdSource, 2005)—making our effort for K–12 education slightly below the national average at $40 per $1,000 of personal income compared to $41 nationally.[1]

All of this is compounded by the characteristics of our school children. We have 8% more pupils per capita to educate, which, when combined with higher salaries and generally greater student needs (48% of California's school children qualify for free and reduced price lunches and 25% are English Language Learners), requires that each dollar stretch further.

THE HISTORY OF SCHOOL FINANCE: FOCUS ON CALIFORNIA

National Trends

The history of school finance in the United States during the 20th century can be thought of as having three distinct foci. The first is equity, the second productivity, and the third and most recent, adequacy. The focus is on how these factors have played out in California.

TABLE 2: Staff per 1,000 Pupils: 2003–04

Staff	U.S. Avg.	CA	CA Rank	% of U.S. Avg.
Total Staff	123.0	90.9	48	74%
Total District Staff	5.9	5.2	31	88%
Officials and Admin.	1.3	0.4	48	31%
School Staff	89.9	68.4	50	76%
Certified School Staff	69.7	51.7	49	74%
Principals and APs	3.4	2.1	50	62%
Teachers	63.1	48.3	49	77%
Guidance Counselors	2.1	1.1	50	52%
Librarians	1.1	0.2	51	18%

Source: EdSource (2005)

Equity

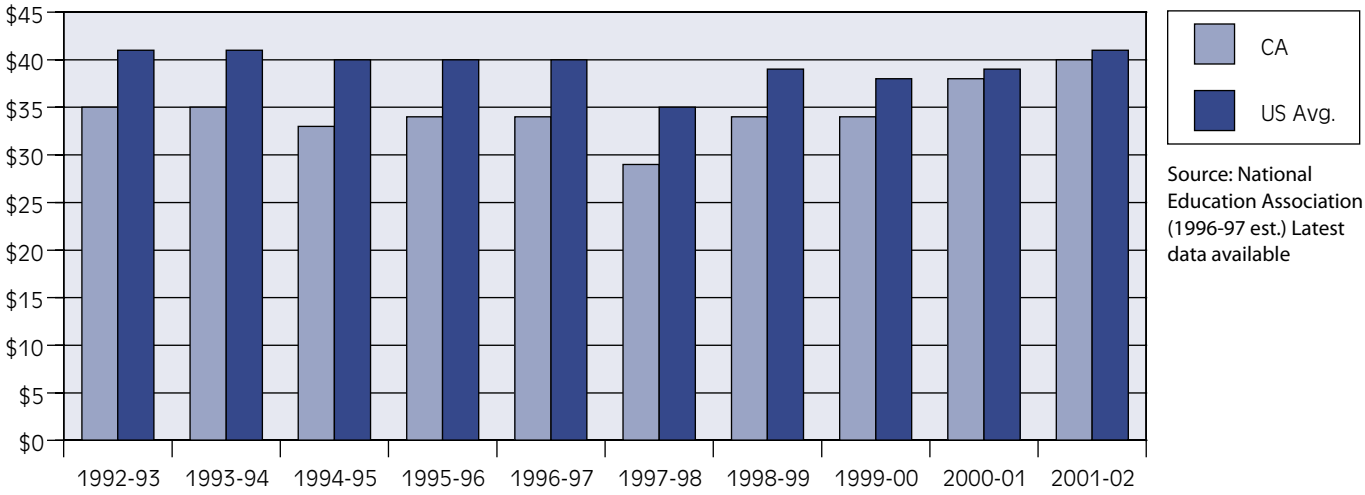
From the 1950's onward, equity became a focus and goal of school finance. Equity required designing state funding systems that mitigated the impact of differential property wealth per pupil across school districts. Designing school finance mechanisms that provided state aid in inverse relationship to the property wealth of school districts helped level the playing field, and enabled property poor districts to have more money than would otherwise be available.

Productivity

In the 1990s considerable emphasis was placed on understanding the relationship between money and student performance. Unfortunately, economists and statisticians have not been able to consistently identify the nature of that relationship and quantify it so that policymakers can appropriate funds in ways that will ensure improved student learning. The reasons for this are as complex as the equations used to estimate the relationship. But essentially they include a lack of clarity about the goals of education, and insufficient precision in the tools used to gather data on school finance.

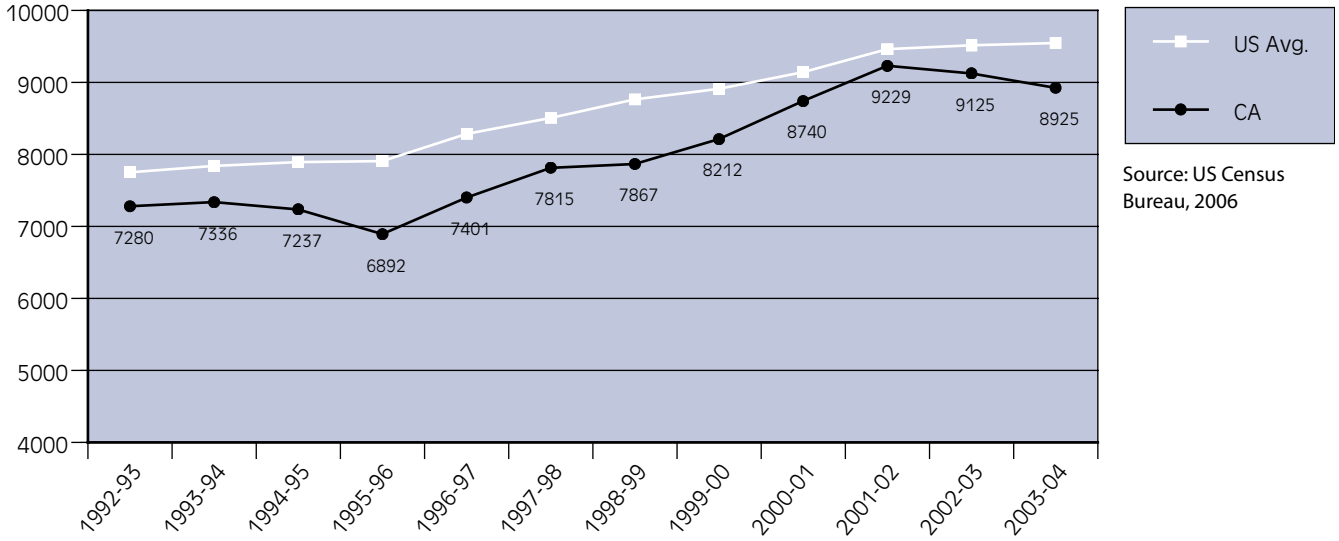
While today most would agree that the goals of school are to improve student performance, measuring that solely through standardized tests is controversial. Today's tests don't always do a good job of measuring student reasoning and problem solving

FIGURE 1: Public K-12 Expenditures per $1,000 of Personal Income



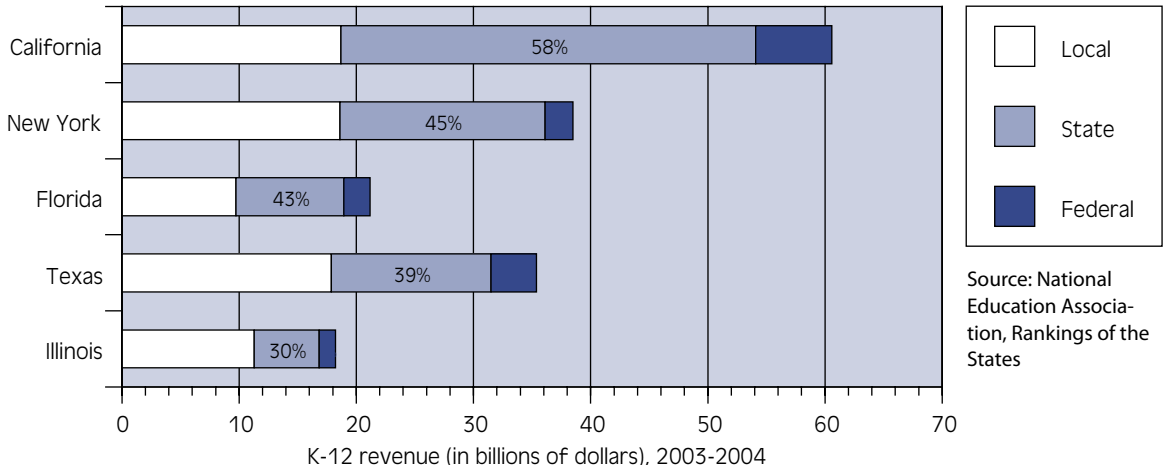
Source: National Education Association (1996-97 est.) Latest data available

FIGURE 2: California Expenditures per K-12 Pupil (ADA)



Source: US Census Bureau, 2006

FIGURE 3: Public K-12 Revenue from Local, State and Federal Sources



Source: National Education Association, Rankings of the States

skills, and the multiple-choice nature of most tests makes it difficult to asses how well children can communicate. Attempts to quantify these more complex schooling outcomes have not been very successful. Moreover, measures of self esteem and good citizenship (also potentially important outcomes of schooling) are harder to measure at the individual student level.

Moreover, 28 states (California included) only collect finance data at the school district level. While the other 21 collect school level finance data, I have argued elsewhere that until we are able to sort out expenditures on an *individual student basis,* it is unlikely that we will be able to measure the impact of additional resources on student performance (Picus and Robillard, 2000). Even then, the ability to make accurate estimates of the effect of money on performance may be limited by the fact that we generally spend more money on those children with the greatest educational needs. Careful controls for previous ability and for the characteristics of individual children will be needed to understand the productivity issue. However, with the more recent emergence of adequacy as a school finance goal, alternative approaches to determining how much money is needed have been developed.

Adequacy

Another school finance strategy emerged in the 1990s. School finance adequacy became the most effective approach for challenging state school funding systems following the Kentucky Supreme Court's ruling in 1989 that the Kentucky funding system (and the entire education system) was unconstitutional.[2] The Kentucky court ruled that all children should be able to meet certain minimum standards, and that resources were inadequate to ensure that was possible. In response, the State Legislature appropriated an additional one billion dollars a year for education and established one of the nation's most extensive testing systems. Widely studied, results suggest that the work in Kentucky has led to improved student performance in the last decade.

The adequacy movement asks a simple question: How much money is needed to ensure that all children—or almost all children—can meet a state's performance standards? The problem with this approach lies in determining what that amount of money is. Today there are four approaches for estimating school finance adequacy. They are:

Successful districts: This approach finds school districts that currently meet state standards and uses their costs as an estimate of adequacy.

Cost Functions: Using advanced statistical techniques, analysts estimate the resources required for students to reach a given performance level on a standardized test, controlling for student characteristics such as family income and home language.

Professional Judgement: Panels of educators are brought together to describe the resources they would need in a school to have some assurance that all children could meet the state's performance standards. Once specified, the costs of these resources are estimated to arrive at an estimate of the costs of adequacy.

Evidence Based: This approach relies on current educational research on what works in schools to estimate the resources needed to reach state performance standards and then estimates the costs of those resources.

A fifth approach is currently being tried in California. As part of an extensive school finance research project across the state, economists are using what might best be called a constrained optimization model to estimate adequacy. This approach asks school officials to design schools that they think will enable students to meet California student performance standards within varying fiscal constraints, and then asks them to assess the probability that students will attain the standards under that funding model. Although the results of this study were not complete as this was written, a pilot study found that educational professionals organized schools differently as the per pupil funding levels increased. Not surprisingly, the studies also found that the estimated probability of students meeting the standards also increased with funding (Rose, Sonstiele, and Richardson, 2004).

Adequacy studies are used to estimate how much is needed to provide the children of a state with an adequate education. Studies of this type have been conducted in 30 states, and are summarized in the January 2005 Quality Counts issue of *Education Week* (Education Week, 2005). In every instance, the studies have found that current funding levels are inadequate to enable all children to meet the state's educational standards.

While all of these studies offer different methods for estimating how much money is needed, none

There are three major events that shape the current structure of California school finance, the Serrano decision, Proposition 13, and Proposition 98.

appear perfect and all are subject to criticism (see for example, Hanushek, 2005). This suggests that such studies may not provide definitive answers to how much is needed, and the high cost estimates found in many states may not lead to improved student performance unless they are combined with a clearer focus on how the money should be used.

Adequacy has been used as the basis for legal challenges to the school funding system in many states, and in all instances has been successful in getting the courts to rule that current funding levels are inadequate. California has its own adequacy lawsuit, *Williams v. California*. The suit in California was unique in that it seemed to focus mostly on the lack of decent school facilities for many school children, and sought more state oversight into the management of school districts.[3]

The *Williams* suit was settled in 2004, with an agreement by the state to spend something on the order of one billion dollars to improve school facilities in the districts with the most severe facility problems, and to provide additional funding in some settings. The funding for facilities is not "new" money.[4] While this seems a great deal of money, it compares poorly to New York where adequacy studies have recommended spending increases of six to nine billion dollars. These increases are recommended for a state with half as many children as California, and one that currently spends nearly 50% more per pupil. Adequacy studies in other states have recommended funding increases from 10% to over 35%, suggesting that the one billion dollars in additional funds that Williams will provide for California schools (less than 2% of the more than 60 billion in the Governor's 2006–07 budget) may not be the final answer to the question of adequacy in California.

California's School Funding Story

As the discussion above implies, there is substantial evidence that current funding levels for California's K–12 education system are inadequate. This section provides a brief history of California school finance, and outlines why it has become so complex and unwieldy. It also provides a sense of why changing the system has been—and likely will continue to be—so hard to do.

There are three major events that shape the current structure of California school finance, the *Serrano* decision, Proposition 13, and Proposition 98. The options facing state policymakers today are limited substantially by these past events. How each affects today's school finance environment is described below.

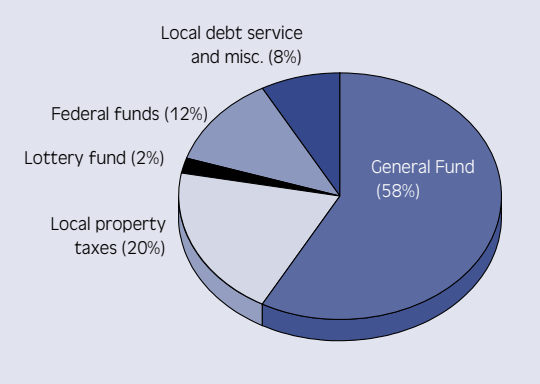
The Serrano Decision

Prior to the early 1970s, California relied on a foundation approach to school finance. In general this funding mechanism guarantees each school district a fixed amount of revenue per pupil in exchange for levying a certain tax rate. Districts that can't 'raise that amount through local taxes receive state aid to make up the difference. While this is a sound approach to school finance (see Odden and Picus, 2004), if the foundation level does not keep up with the financial needs of schools, local districts are forced to rely on their own property tax base to raise the balance. In California, there were (and continue to be) dramatic differences in the property wealth per pupil across school districts, leading to considerable variation in the ability of school districts to raise additional revenues. This led to substantial differences in per pupil spending across the state.

The *Serrano*[5] lawsuit, filed in 1968 and litigated into the 1970s, was the first step in transforming California's school finance structure. Serrano required that all wealth-related spending differences between school districts be eliminated, or reduced to no more than $100 per pupil.[6] Today, approximately 97% of all California public school children reside in school districts that fall within this narrow spending band when the size and type of district are considered.[7] However, in the three decades since this system was put in place, a growing proportion of state funding for education has been provided through categorical programs which are outside of the Serrano requirement to reduce wealth-related spending differences.[8]

Today, something on the order of one third of state revenues for schools is distributed through these categorical programs (nearly $12 billion in the 2006–07 budget request). There is evidence that this approach has led to a different, but equally detrimental, set of spending differences. Sonstelie, Brunner, and Ardon (2000) showed that this funding system has resulted

FIGURE 4: Revenue Sources K-12, All Budget 2005-06*



Source: California Department of Finance
* Includes funds for California Department of Education state operations, state special schools, state school facilities bond repayments, contributions to the State Teachers Retirement System, State Library, and Commission on Teacher Credentialing.

in substantial inequities in the level of resources available to children across school districts. Betts, Ruben, and Danenberg (2000) further show there are considerable variations in the resources (e.g., teachers, instructional materials, etc.) available to children across the state. The result today is a confusing system where there is often little relationship between identified student needs and the targeting of revenues.

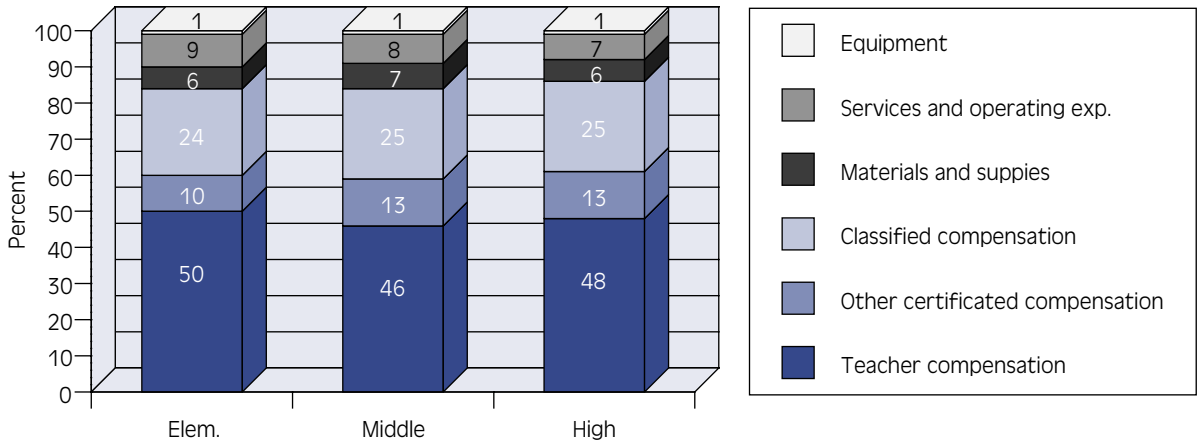
Categorical grants are not a bad thing. In fact the largest categorical programs are for special education and class size reduction. Many others are used to ensure that funds are directed to students with special needs so that they receive the required services. For instance, Rose et al. (2003) have shown that in many instances these funds increase spending in the schools with higher percentages of high poverty children. However, California has developed a system of more than 100 categorical programs, many of them small, and highly focused on narrow student populations—or often on specific sets of school districts with little regard to student needs. In many instances, districts qualify for funding simply by virtue of having received funds from a particular program in the past. In addition, some programs don't give districts or schools a revenue projection until well into the school year, and then require the funds to be expended in that same year. This forces districts to make poorly thought out and poorly planned expenditures in order not to lose the money.

While there have been a number of efforts to simplify the categorical programs, most of the so-called block grants that have been established have come with their own sets of complex rules and regulations. For this reason, they have had little impact on the general view in schools that the rules are burdensome and overly complex. This high level of state control over funding is largely the result of Proposition 13.

Proposition 13

Passed in 1978 by an overwhelming majority of voters, Proposition 13 dramatically changed the fiscal relationship between schools and the state. By limiting property taxes to 1% of assessed value, and by defining what assessed value is and how much it can grow, Proposition 13 not only reduced the state's

FIGURE 5: School Expenditure K-12, by Type*



Source: Rose, H., Sonstelie, J., & Reinhard, R. (2006)
*Based on schools in study for 2001-02 school year

The heart of the problem for California school finance today is that we don't have a clear picture of how much money we need.

revenue capacity for governmental services, it also placed control of all property taxes squarely with the Legislature. As a result, local school districts today have no revenue raising authority to speak of, and any additional revenue generated by property taxes becomes an offset to the state's general funding of schools, known as revenue limit funding.[9]

The funding system that was developed in response to Proposition 13 remains the basis for school funding today. California uses what is generally thought of as a foundation program. Each district has a revenue limit—a historically-based figure that has been adjusted upward over time based on cost of living adjustments and the number of students in a district. The revenue limit is funded by a combination of property taxes and state funds, which make up the difference between the revenue limit guarantee and the property tax collections. Categorical programs, as described above, make up the balance of a school district's state resources.

Proposition 98

In 1988, the voters passed an initiative designed to guarantee that school funding keep pace with changes in enrollment and the cost of living (per capita income). Proposition 98 also includes a provision (test) that schools receive a minimum share of the state's budget each year. Known by its ballot designation of Proposition 98, that measure continues to impact California fiscal policy today. While it guarantees approximately 40% of the state's general fund budget to K–14 schools (K–12 and community colleges), it has a number of complex requirements that impact how new state resources can be spent, and establishes floors in funding that can make it harder to made reductions in education spending when revenues are low. It was even suspended once in 2003–04 due to the poor fiscal condition of the state. Although Proposition 98 provides a theoretical floor for education spending, it also has limited legislative flexibility in budget decisions, and as a result has in some instances also served as a ceiling for education spending.

Today the focus of California's school reform efforts is standards-based accountability. California has been a leader in establishing performance standards for students. The use of the Academic Performance Index (API)—and its wide publication across the state—has spurred schools to improve student learning as determined by the measures that constitute the API (test scores, attendance, and dropout rates). This provides a clear description of what students need to know and be able to do. What is missing is a clear system of funding that is tied to strategies that will lead to that improved level of performance. In fact, when all of the many factors that impact funding for schools in California today are combined, there appears to be much confusion, and a general agreement that to meet our current performance standards, schools need more money.

In the section that follows, an attempt is made to discuss the major policy issues facing the state today, how they are impacted by the past, and the adequacy options available today.

CALIFORNIA SCHOOL FINANCE TODAY

Resources for Schools

The heart of the problem for California school finance today is that we don't have a clear picture of how much money we need. While the governor and other policymakers are understandably reluctant to determine what that amount is—since it is likely to be more than we currently spend—absent a target to strive for, the level of school funding will continue to be determined through political compromises emerging from an increasingly unstable and under-funded state revenue system. This problem can only be solved by determining how much is needed to adequately fund California's schools.

TABLE 3: State Owes Proposition 98 Settle-up for Past Years *(Dollars in Millions)*

1995-96	$0.00
1996-97	$0.00
2002-03	$491.60
2003-04	$617.60
2004-05	$1,620.90
2005-06	$1,298.90
2006-07	$0.00
	$4,029.00

Source: Legislative Analyst's Office, September 2006 (nominal dollars)

TABLE 4: Year-to-Year Changes in Proposition 98 Funding (Dollars in Millions)

	Budget Act 2005-06	Budget Act 2006-07	Change	
			Amount	Percent
K-12	$44,644	$49,113	$4,469	10.0%
Community colleges	$5,217	$5,894	$677	13.0%
Other	$107	$114	$7	6.5%
Totals	**$49,968**	**$55,121**	**$5,153**	**10.3%**
General Fund	$36,591	$41,295	$4,704	12.9%
Local property tax	$13,377	$13,827	$450	3.4%
K-12 attendance	$6,031,404	$5,957,368	-$74,036	-1.2%
K-12 per pupil spending	$7,402	$8,244	$842	11.4%

Source: Legislative Analyst's Office, September 2006 (nominal dollars)

TABLE 5: Increase Funding for Declining Enrollment Adjustment

	2001-02	2002-03	2003-04	2004-05	MAY ESTIMATE 2005-06	ENACTED 2006-07
Statewide growth rate	2.10%	1.70%	0.90%	0.40%	-0.22%	-0.27%
Districts receiving adjustments	327	375	412	438	*	*
"Phantom" ADA** funded***	16,000	20,000	29,000	49,000	69,000	73,000
Costs of declining enrollment (in millions)	$74	$93	$137	$242	$357	$398

* Unknown
** Average daily attendance
*** Difference between level at which districts are funded (based on prior year) and the numbers of students they are actually serving.
Source: Legislative Analyst's Office, September 2006 (nominal dollars)

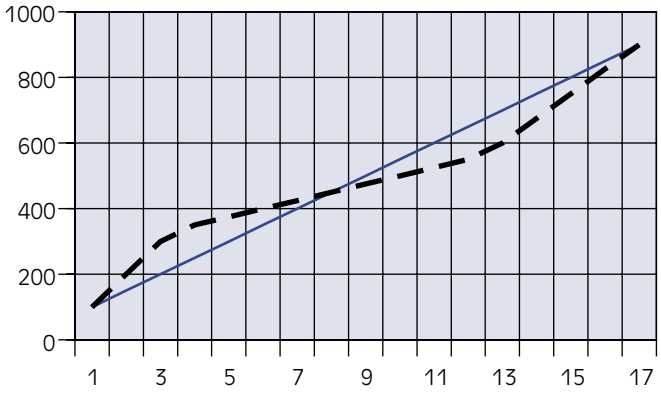
POLICY IMPLICATIONS

No Child Left Behind recognized that states needed a dozen or more years to establish systems to enable all children to meet performance standards. Therefore it is unrealistic to expect that California can find all the money it needs in one year. But it is essential to know what we need and have a plan to get there. Even with that, it is likely that state revenues will fluctuate over time.

Manage Resource Flow Over Time

Any funding plan needs to accommodate the long-term growth in revenue and provide for dips and spikes over time. Figure 6 provides a simplified "cash flow" analysis of how the state could manage its resources toward the goal of adequate funding. In years when revenues exceed needs, it would be wise to bank funds for future years when state revenues are below identified needs. Similar to many states' "rainy day funds," this concept probably requires substantially more spending restraint on the part of the Legislature or return of tax receipts to taxpayers in good years than they have in the past. It also requires the education community to allow the funds to be banked, rather than diverted to uses not part of a long-term strategic plan. It requires

FIGURE 6: Managing the Flow of Resources Over Time



a dramatically different approach to the allocation and use of tax revenues than we have seen in California in recent history.

But where does that money come from? California is one of the wealthiest states in the nation. Our average per capita income exceeds the national average by nearly 7% and ranks 12th among the states. Yet our spending on education is similar to states near the bottom of the income rankings. **The question is, who should pay for our schools? There are two options, neither popular, but both with the potential to resolve this funding issue.**

Consider Income Tax Increase On Two Highest Tax Brackets

It is estimated that these citizens (with California taxable incomes exceeding $200,000 for individual returns and over $400,000 for joint returns) will receive nearly $12 billion in tax breaks from the federal tax cuts. Tapping these tax benefits could go a long way toward funding schools without increasing the total tax payments of the state's wealthiest citizens.

Review and Modify Proposition 13

This approach is even less popular than the previous suggestion. Proposition 13 has hamstrung state and local government for years by reducing the revenue potential of all governments. Moreover, it has created substantial inequities, not only between homeowners in similar homes, but across classes of property with more of the tax burden being shifted to residential property. (More on Proposition 13 in Chapter 3).

While some argue that Proposition 13 is needed to protect business, in reality it only protects existing businesses, and makes it hard for new firms to build the production facilities they need and to compete with existing firms. Under those circumstances, not only does governmental revenue suffer, but the lack of competition hurts all consumers. It is possible to find a fair and reasonable way to increase the revenue potential of property taxes while ensuring that state residents don't get taxed out of their homes or businesses, provided we are willing to make the sacrifices Governor Schwarzenegger has called for.

Some have argued that the property tax rolls should be split, allowing business property to be assessed at full market value (and possibly subject to a higher tax rate), while residential property continues to be treated as it is currently and only reassessed when it is sold. Since business property changes hands less frequently than residential property, theoretically this would stem the shift of property taxes to residential property. Another option might be to assess all property at market value, establish tax rates on that new assessment that collect the same revenue (rates should be lower given the assessment growth caps in Proposition 13) and allow schools to seek approval for higher property taxes up to the existing 1% rate cap. Other potential options exist as well, although the political climate in our state suggests such changes are unlikely in the near future.

Other Options

There are also additional options for ensuring students receive an adequate education. Analyses of adequacy often point out that children have needs that go beyond the public school system's capabilities and responsibilities. Access to good prenatal care, high quality

medical and dental facilities, and good preschools can lead to improved school performance for many children, particularly those from low-income homes. A recent analysis of the public, and of nonprofit services available for children and their families in the area surrounding the University of Southern California, revealed that there is as much as $12,500 per child available. These resources provide assistance to families, food stamps, recreation opportunities, early childhood education programs, and cultural activities, to name just a few. Combined with a similar amount through the public schools in that area,[10] there is nearly $25,000 available per child to provide educational and other social services. But often the problem lies in making sure that these resources reach their intended target, and that the agencies responsible for providing those services coordinate their efforts.

While schools have typically been organized from the bottom up and most other social services from the top down, California's highly controlled school funding system may be an ideal place to begin breaking down the barriers between agencies toward the creation of coordinated educational and social services for all children. This could be accomplished at little or no additional cost.

CONCLUSION

California faces a number of major challenges in providing adequate funding for its public schools. The student population includes large numbers of children who require additional services to succeed and a school revenue structure that is entirely dependent on the condition of the state budget. These conditions have produced a high demand for educational resources coupled with a fluctuating capacity to meet that need. While the state has established high standards for what our children need to know and be able to do, it has not yet developed a clear strategy to fund the educational services needed to meet those needs.

ENDNOTES

1 National Education Association Rankings and Statistics 2004-05, with 2001-02 data which is latest availale.

2 *Rose v. Council for Better Education*, 790 S.W. 2d 186 (Kent, 1989).

3 California is also the only state where the defendants (the State) countersued, claiming that the problem was not inadequate funding, but rather mismanagement by local district officials who had access to the same level of funding as other, more successful school districts.

4 Williams facility funding comes from the Proposition 98 Revision Account, money that has already been appropriated for Prop 98 but not spent.

5 *Serrano v. Priest*, 5 Cal. 3d 584, 487 P.2d 1241, 96 Cal. Rptr. 601 (1971) (*Serrano* I); *Serrano v. Priest*, 18 Cal. 3d 728, 557 P.2d 929, 135 Cal. Rptr. 345, (*Serrano* II) (1976), reh. denied, Jan. 27, 1977; as modified Feb. 1, 1977 cert. denied, 432 U.S. 907 (1977).

6 This figure has been adjusted for inflation and today is over $300 per pupil.

7 California school districts are organized into elementary (K–8), high school (9–12) and unified (K–12 districts, and further divided into small (less than 101 students for elementary, less than 301 for high school, and less than 1,501 students for unified districts) and large districts. The assessment of *Serrano* compliance is determined in these six groups of districts.

8 Wealth-related in terms of assessed property values within bounds of a school district but not defined by income. Such "high-wealth" districts included San Francisco, Oakland, Richmond, Berkeley, Los Angeles where the majority of children in poverty lived.

9 There are a few districts that are an exception to this. Known as basic aid districts, they are able to generate more property tax revenues than their revenue limit calls for—and they are allowed to keep the difference. Voter approved property taxes for local general obligation bonds are also an exception. While an important issue, it has relatively little bearing on the general discussion that is the focus of this chapter.

10 When the total "all funds" budget of the LAUSD is divided by its average daily attendance (ADA), the resulting calculation approaches $12,500 per student.

REFERENCES

Betts, J., Rueben, K., & Danenberg, A. (2000). *Equal resources, equal outcomes? The distribution of school resources and student achievement in California*. San Francisco, CA: Public Policy Institute of California.

EdSource. (2005). *How California ranks: A national perspective*. Palo Alto, CA: EdSource.

Education Week. (2005). *Quality counts: No small change, targeting money toward student performance.* Bethesda, MD: Editorial Projects in Education.

Fortune 500. (2006). *Fortune 500: Full list*, Retrieved May 11, 2006 from http://money.cnn.com/magazines/fortune/fortune500/full_list

Hanushek, E.A. (2005). *The alchemy of 'costing out' an adequate education*. Retrieved May 11, 2006, from http://edpro.stanford.edu/hanushek/admin/pages/files/uploads/alchemy.revision.pdf

Legislative Analyst. (2006). *2006-07 Budget analysis, education chapter*. Sacramento, CA: Legislative Analyst's Office. (2006, March 10). Retrieved May 11, 2006, from http://www.lao.ca.gov/analysis.aspx?year=2006andchap=0and toc=4

National Center for Education Statistics. (2006). *Projections of education statistics to 2014.* Washington, DC: National Center for Education Statistics, Table 33. Retrieved May 11, 2006, from http://nces.ed.gov/programs/projections/TableDisplay.asp?id=tab_33.aspanda=elemsec

NEA (2005). *Rankings and estimates*. Washington DC: National Education Association (June).

Odden, A., & Picus, L. (2004). *School finance: A policy perspective* (3rd ed.). New York: McGraw Hill.

Picus, L., & Robillard, E. (2000). The collection and use of student level data: Implications for school finance research. *Educational Considerations*. 28 (1), 26-31.

Rose, H., Sonstelie, J., Reinhard, R., & Heng, S. (2003). *High expectations, modest means: The challenge facing California's public schools*. San Francisco, CA: Public Policy Institute of California.

Rose, H., Sonstiele, J., & Richardson, P. (2004). *School budgets and student achievement in California: The principal's perspective.* San Francisco, CA: Public Policy Institute of California.

Sonstelie, J., Brunner, E. & Ardon, K. (2000). *For better or for worse? School finance reform in California*. San Francisco, CA: Public Policy Institute of California.

CHAPTER 3

Funding California's Schools, Part II: Resource Adequacy and Efficiency

Jay G. Chambers and Jesse D. Levin
American Institutes for Research (AIR)

PROVIDING AN ADEQUATE SYSTEM OF SCHOOL FUNDING, ONE THAT AFFORDS ALL STUDENTS THE OPPORTUNITY TO SUCCEED ACADEMICALLY, HAS BECOME A NATIONAL MOVEMENT. WHILE THE ANTECEDENTS OF THE ADEQUACY MOVEMENT HAVE BEEN AROUND FOR A LONG TIME, IT IS IRONIC THAT IT HAS BEEN GIVEN A SIGNIFICANT BOOST SINCE 2000 BY THE ADVENT OF THE NO CHILD LEFT BEHIND (NCLB) LAW. This law builds on the standards-based reform movement of the 1990s and requires that by 2014 all students reach a certain level of proficiency as defined by their state education system. This requirement has helped define the obligation of the states to meet the needs of the diversity of students served within each state public education system, and hence, push educational adequacy to the forefront of debate in school finance reform.

The purpose of this paper is to outline the implications and challenges put forth by the adequacy movement for the state of California. The chapter is organized into three sections. Section 1 includes a brief historical perspective on school funding for the nation as a whole and in the context of California. The second section describes the concept of cost-based funding and how it addresses several common problems in traditional school funding systems. The final section describes the strengths and challenges of various approaches to addressing adequacy and what implications these may have for developing a new K-12 school funding system in California.

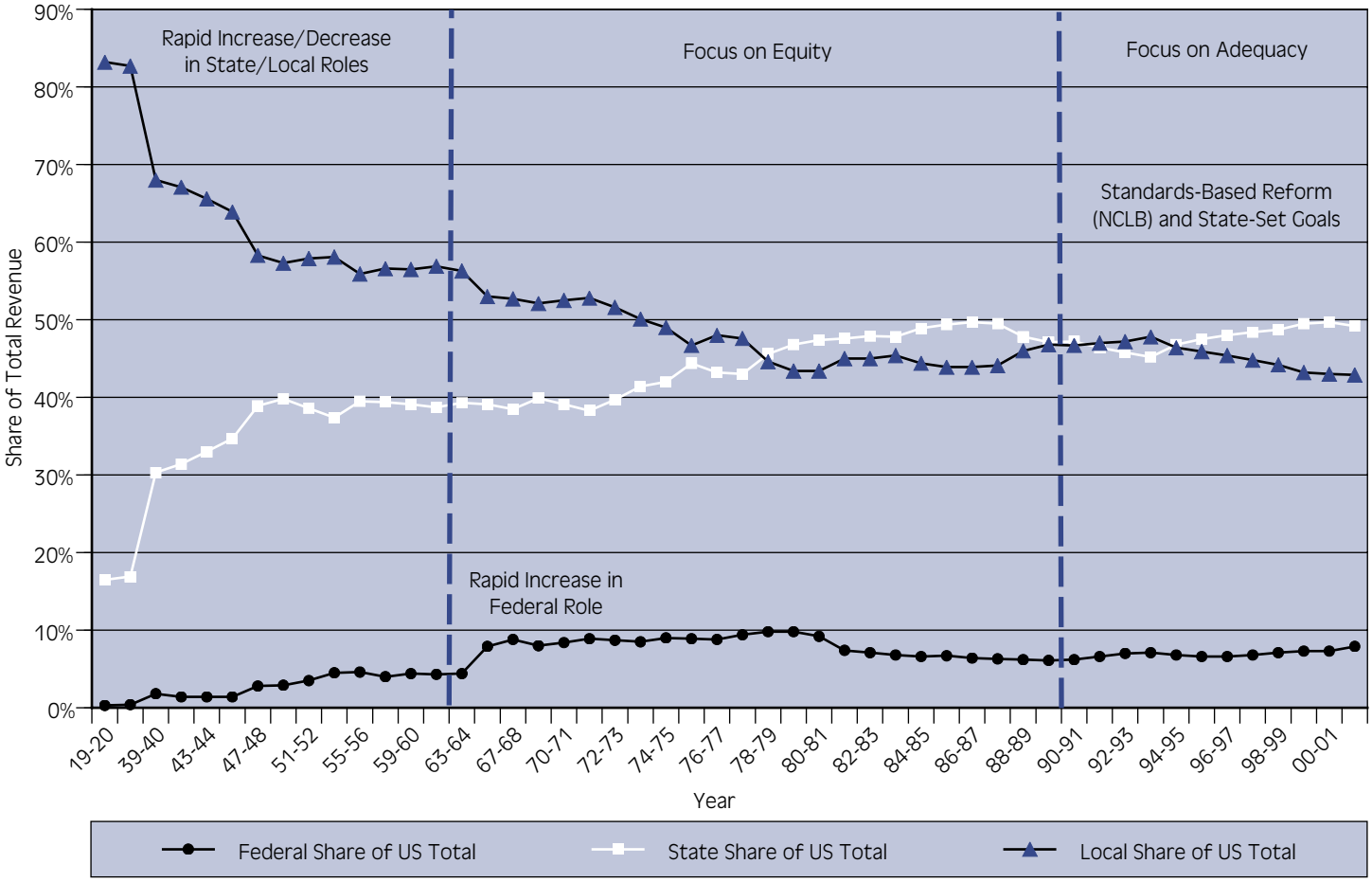
HISTORICAL TRENDS IN LOCAL, STATE AND FEDERAL SHARES OF SCHOOL FUNDING

During the first half of the 20th century, schools were for the most part funded by local taxes. In 1920 well over 80% of K–12 revenues were derived from local sources, while less than 20% came from the state and a negligible amount from the federal government (see Figure 1). Up through the 1970s, the dramatic declining share of aggregate educational revenue made up by local sources was largely offset by a roughly equal increase in state revenue. In addition, the federal role expanded, growing to a maximum of approximately

10% of total K–12 revenues in 1979–80. In the two decades that followed, the share of federal revenues has decreased slightly, with state revenues outpacing local revenues by up to 5% over most of the period. Today, the state plays the largest role, on average, in school funding, providing about half of the revenues, while local taxes contribute about 43%. The federal government provides the remaining 6–8%, a proportionate contribution which has remained in this range for the past 20 or 30 years. While California has followed the national trend of an increasing state and decreasing local responsibility in school funding, the California experience has been far more pronounced. Figure 2 illustrates and contrasts the federal, state, and local revenue trends of the nation as a whole and California from 1974–75 through 2001–02. While the federal share of total California revenues has for the most part followed that of the nation, state and local revenues have differed dramatically.

For instance, the largest difference between the state and local shares of total US educational revenue over the 28-year period was a mere 6.3% (in 2000–01) compared to a 47.7% state/local difference for California (in 1987–88). The well-known explanation for the exaggerated trend experienced by California was the notorious court case of *Serrano v. Priest* and subsequent passing of Proposition 13, the latter of which, by capping property tax rates, effectively limited the amount of local tax revenue that could be collected. The end result was a major

FIGURE 1: US Public School Income From Local, State and Federal Sources, 1929-2002



Notes: Local Revenues Include a relatively small amount from nongovernmental private sources (gifts and tuition and transportation fees from patrons).
Source: U.S. Department of Education, National Center for Education Statistics, Biennial Survey of Education in the United States, 1919-20 through 1955-56; Statistics of State School Systems, 1957-58 through 1969-70; Revenues and Expenditures for Public Elementary and Secondary Education, 1970-71 through 1986-87; and The NCES Common Core of Data (CCD), "National Public Education Financial Survey," 1987-88 through 2001-02

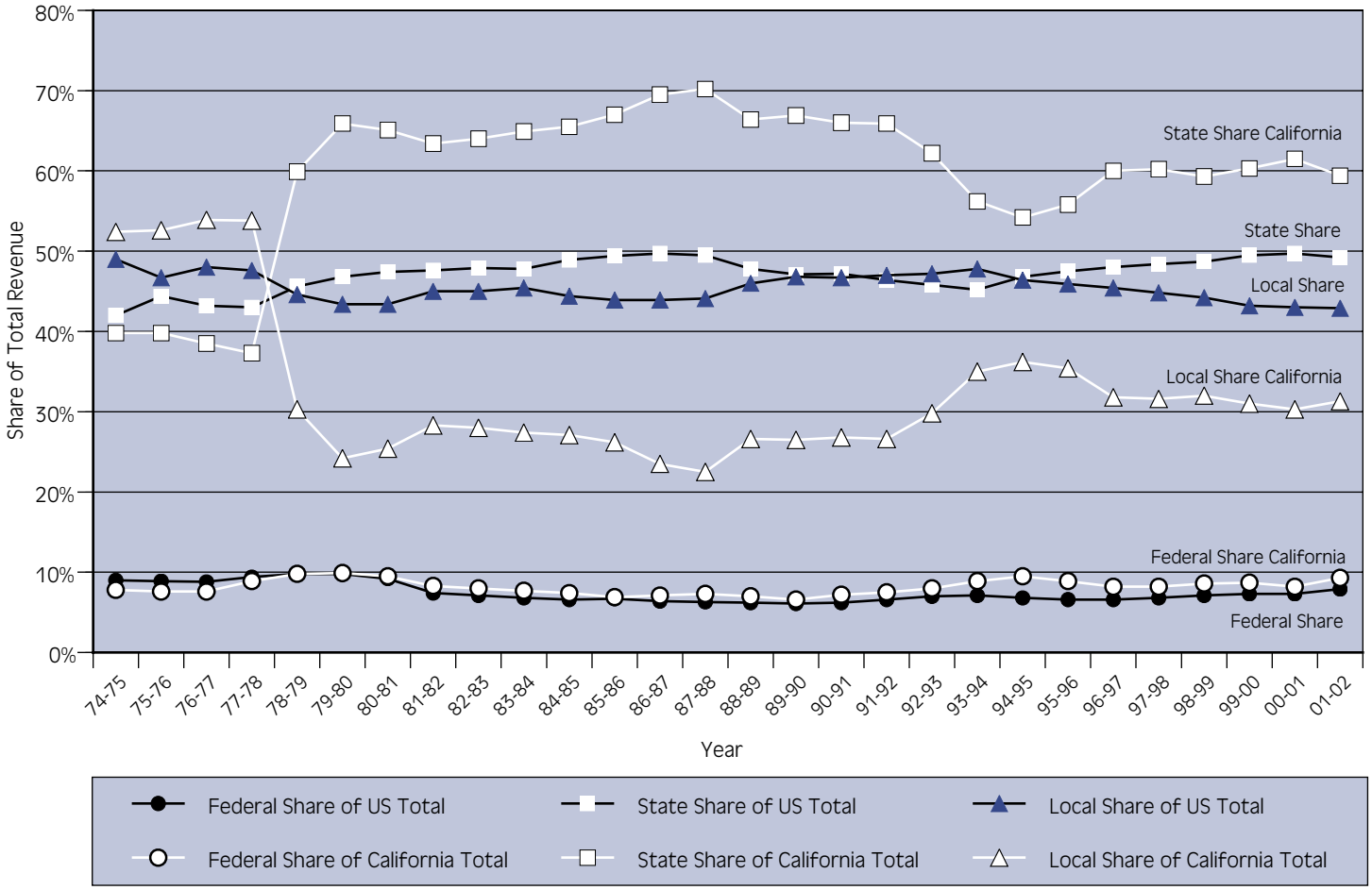
shift of support for school finance from local to state revenue sources or, as stated in Downes (1992):

> The primary effect of Serrano II and Proposition 13 was thus to create what was effectively a state-financed system of public education.

Clearly, with the growing role of the states in school finance from the 1960s to the 1970s, the way in which states distributed revenues to local school systems became more significant and drew more attention. The growing state role was largely an outgrowth of the realization of the interconnectedness between local communities and the potential impact of the quality of education in one community on the labor market and well-being of its neighbors. Prior to the recent adequacy movement, the amount of money devoted by states to education and the mechanisms used to distribute funds to local school districts was, for the most part, a result of political bargaining and had little to do with student needs.

With the growing state role, the focus of the funding debate in this new era of school finance turned to equity or, more precisely, to what the school finance literature referred to as horizontal equity. Under this concept, students and taxpayers across districts should be treated similarly with respect to the resources they receive and taxes they are required to pay, respectively (see Coons et al., 1970). Under this kind of framework, the equitable provision of

FIGURE 2: US and California Public School Income From Local, State and Federal Sources, 1974-75 to 1999-00



Notes: Local Revenues Include a relatively small amount from nongovernmental private sources (gifts and tuition and transportation fees from patrons).
Source: U.S. Department of Education, National Center for Education Statistics, Biennial Survey of Education in the United States, 1919-20 through 1955-56; Statistics of State School Systems, 1957-58 through 1969-70; Revenues and Expenditures for Public Elementary and Secondary Education, 1970-71 through 1986-87; and The NCES Common Core of Data (CCD), "National Public Education Financial Survey," 1987-88 through 2001-02

resources simply required ensuring equal access to educational dollars across local jurisdictions. In turn, state governments faced two questions:

- How much can we afford to spend?
- How do we best distribute these dollars among local communities?

Indeed, it was through *Serrano v. Priest,* the property tax limits imposed by Proposition 13, and the subsequent centralization of school finance at the state level that California was pushed into asking and answering the second of these questions. Unfortunately, an unintended consequence of the Court's ruling was that funding was to be equalized down where, rather than providing general aid to poorer districts at the level enjoyed by more affluent districts, spending limits were imposed at a level between the two. That is, while poorer districts had their levels of general aid increased, many less needy districts witnessed dramatic decreases in the amount of general aid they received. As John Mockler, former executive director of the California State Board of Education, explained, "This was like having a crippled arm and a good arm and making things equitable by crippling both arms."[1]

- **How much can we afford to spend?**
- **How do we best distribute these dollars among local communities?**
- **How much differently do we need to treat children with varied needs?**
- **How differently do we need to treat the various types of communities in which these children are served?**

To compensate for the decline in general aid to districts, the following years saw California's school finance formula becoming progressively more complex, with a growing amount of categorical dollars being used to address special need populations. As mentioned in the previous chapter, the state of California currently has approximately 100 categorical programs that make up its school funding formula.[2] However, it should be noted that there have been efforts made to consolidate overlapping categorical aid programs with duplicative goals.[3]

As the use of categorical aid is targeted for specific purposes or student populations, the shift from general to categorical funds meant that local education authorities lost significant control over how they could allocate their resources. This inflexibility in the use of categorical funding has been cited as a major factor in districts' inability to target resources to their best use. To make matters worse, recent literature (Timar, 2004) suggests that the relationship between student need and the distribution of funds from categorical aid programs is weak at best and regressive at worst (i.e., in some cases the least needy students are receiving the highest level of these funds).

Shifting from Equity to Adequacy

Many would agree that the current school finance debate in many states could be described as tumultuous. State governments are being sued for failing to provide an "adequate" education, suits which often results in a lengthy appeals process. While definitions of what constitutes an "adequate" education are at least as numerous as the court cases being tried, for the purposes of this chapter we define this concept as follows:

> A public education may be perceived as "adequate" when the goods, services, and delivery systems under which they are provided are capable of offering all students, regardless of need or circumstance, the opportunity to achieve a prespecified level of achievement that has been agreed upon as desirable by consensus of a significant constituency of stakeholders.

But exactly how did the debate shift from a (horizontal) equity to adequacy? As it became commonly recognized that children and the communities in which they were served varied widely with respect to their need and wealth, the school finance literature was pushed toward addressing the concept of vertical equity.[4] Under legislation that embraced this concept, state funding systems were developed that treated children and taxpayers of varying need and wealth in systematically different ways. For taxpayers, it meant recognizing differences in ability to pay for public education and the purchasing

power of the educational dollar in their geographic area. For children it meant recognizing differential student needs of economically and disadvantaged children, and eventually students with disabilities and those for whom English was not their first language.

It is within this context of vertical equity that we find the movement towards the concept of adequacy where the following questions are asked:

- How much differently do we need to treat children with varied educational needs?
- How differently do we need to treat the various types of communities in which these children are served?

The first question begs for some basis on which to define how children differ with respect to their needs. For example, we could simply define this in terms of different types and intensities of services, but then we need to consider to what end (i.e., what outcomes) we direct those services. That is, what is the educational goal we wish to achieve? The second question leads one to think about purchasing power of the educational dollar and requires some decision on the part of the state to make appropriate adjustments to equalize access to resources and services.

As the conceptual shift from equity over the past 25 years manifested itself into legal action taken by individuals, school districts, and other interest groups, we have seen a majority of states forced to address the issue of K–12 school funding from an adequacy perspective. Most state constitutions contain clauses that describe their obligations to the citizens and children of the state with respect to education. Increasingly, as states have come under litigious fire for failing to deliver on these constitutional promises, their obligations have become interpreted as a charge to provide all students an adequate education, with "adequate" being defined as achieving (or an opportunity to achieve) at some prespecified level of outcome(s).

Thus far, 45 states have been taken to court for failing to fulfill their commitments.[5] Since 1989, 21 states have been told by their own Supreme Courts that their school funding systems are inadequate to provide what their constitutions promise to the children of their state.[6] Feeling the pressure, several other states have undertaken to address the questions of adequacy on their own.

Federal policy also contributed to the push for educational adequacy through the encouragement of better performance of state education systems. The No Child Left Behind (NCLB) law requires greater accountability and even encourages improvements in school funding systems through the newly enacted Education Finance Incentive Grants under Title I of NCLB. It should be noted that California had the components of a strong accountability system in place prior to NCLB, unlike many other states. Through this legislation, the federal government strayed from its traditional "hands off" position with regard to the states' unfettered provision of education. These forces have also helped to fuel a new push for state public school systems to provide an adequate education for all children, irrespective of their need and circumstance.[7] School systems must pay attention not just to the average student, but to students with disabilities and non-native English speakers, as well as those whose economic circumstances have not afforded them the same educational opportunities as their wealthier counterparts. Clearly, school finance systems designed to promote horizontal equity have not been able to achieve this objective. In sum, the state's responsibility as educational provider has shifted from ensuring that resource dollars are distributed equitably among children, to allocating resources so that there is equity in terms of the opportunity each child has to reach some designated level of educational outcomes.

…The [Williams] case called into question the unbalanced relationship between the state's allocation of resources and the standards-based accountability system…

In the context of California, the adequacy movement is still well in its infancy. Thus far, the largest step towards adequacy has been the *Williams v. California* school finance case, where the state was sued for not providing the bare essential resources necessary for children to learn. As Oakes et al. (2003) explain:[8]

> The problems highlighted in *Williams v. California*—students forced to learn in schools with too few qualified teachers, insufficient textbooks and instructional materials, and overcrowded, unsafe buildings—are simply not addressed in today's "results-based" accountability systems.

> In short, the Williams plaintiffs seek to hold state officials accountable for the conditions under which California students are expected to learn, particularly for the often shocking conditions in schools most likely to be attended by poor children and children of color.

What is perhaps most interesting was that the case called into question the unbalanced relationship between the state's allocation of resources and the standards-based accountability system, where schools are expected to perform at a minimally acceptable level. The state was not being held accountable to provide the level of resources that is arguably necessary to achieve at this level. In August 2004 a settlement between the plaintiff and defendant was reached and later in March 2005, was approved by the court. The settlement included the establishment of new, more balanced accountability standards to ensure:

> Each and every student has a right to "sufficient textbooks," a school in "good repair," and a qualified teacher. Districts must perform self-evaluations to ensure compliance with the textbook and facilities standards, and then share the results of their evaluations and teacher misassignment and vacancy reviews with the public in their annual School Accountability Report Cards.[9]

The resources provided per the settlement included:

- $138 million for new instructional materials for students attending the lowest performing schools (in 2004–05 budget)
- $25 million for a one-time comprehensive assessment of school facilities (in 2004–05 budget)
- $100 million per year, beginning in the 2005–2006 school year, up to a maximum of $800 million, to be put into a newly established School Facilities Emergency Repair Account to be used by districts to fix facilities at low-performing schools.

As mentioned in Chapter 2, no new funds were used to settle this suit.

Three Fundamental Adequacy Issues

With the new era of adequacy in place, state policymakers have realized the need to approach the issue of school funding in an entirely different way. Invariably, they have been forced to consider the following three fundamental issues associated with educational adequacy:

- Goals – What are the goals of the school system? More specifically, how do states operationalize the constitutional obligations they have set out for the children they serve?
- Cost – What are the types, quantities, and subsequent costs of various resources required by school systems to achieve those goals? Or more simply, what does it cost to provide an adequate education?
- Distribution of Resources – What kind of funding formula must be devised to ensure all children have access to adequate educational opportunities, as dictated by the system's goals?

Often the clauses found in state constitutions provide vague descriptions as to the exact definition of an adequate education. For instance, the term "thorough and efficient" was introduced in 1857 in Minnesota, in 1872 in West Virginia, and in 1947 in New Jersey to describe the state obligations in providing public education to its citizenry.[10] The interpretation of such constitutional obligations will drive the determination of what resources are necessary to provide educational adequacy. Therefore, before one can begin to address the issue of cost, it is essential to have a well-defined objective of the public education system that includes measurable outcomes that must be attained.

While formal concrete statements stemming from constitutional adequacy clauses are not readily available across all states, two factors have helped push the establishment of these goals statements. First, the recent wave of court cases has revealed the need for states to operationalize their goals for public education. For example, much of what the DeRolph case in Ohio was about was defining the concept of "thorough and efficient" and how it relates to

adequacy in school funding.[11] The recent court case in New York sought to define the concept of a "sound basic education" and to determine the cost of providing this opportunity to all children in New York public schools.[12]

Second, the federal NCLB act has forced all states to design standards-based accountability systems that provide a foundation for appropriate achievement goals. However, it must be noted that academic achievement is not the sole basis upon which the performance of school systems should be evaluated.

Once an educational goal is established, the next step is to determine the cost of an adequate education and develop a system of resource distribution that ensures all districts can provide adequate educational services to their children. Concurrent with the conceptual shift away from equity was a new strand of research and literature that focused on how best to address these issues of cost and distribution. The following section documents the emergence of this literature surrounding cost-based funding, and describes the various models that have been used to determine the cost of achieving educational adequacy.

COST-BASED FUNDING

During the 1970s there were a number of researchers who began to develop approaches to addressing geographic differences in the cost of education.[13] These studies focused, for the most part, on factors affecting the supply and costs of comparable teachers across local jurisdictions. The purpose of these studies was to consider ways of adjusting state school funding for variations in the purchasing power of the educational dollar across local educational agencies (LEAs). However, these variations only scratch the surface of cost differences.

In addition to these cost adjustments, there was a growing recognition that additional state aid would be required to meet the needs of diverse student populations. The growth of federal support for special student populations (e.g., through Title I of the Elementary Secondary Education Act in the 1960s and the Education for All Handicapped Children's Act of the 1970s) increased state recognition that additional state funding would be necessary.

Elements of Cost-Based Funding

In order to break down the concept of cost-based funding more precisely, let us consider three factors that underlie the variations in the costs of educational services. These can be summarized in three words: price, need, and scale. School funding systems need to take these three factors into account when designing the foundation for state aid distribution.

Price refers to the cost of acquiring comparable inputs in different geographic locations. State aid needs to account for variations in the factors that affect the cost of comparable inputs. For the most part, this results from differences in the supply of school personnel in different regions of a state. Variations in the cost of living and the attractiveness of different regions of the state affect the willingness of individuals to live and work in certain areas. This is just as true for auto mechanics, engineers, store clerks, and lawyers as it is for school teachers. Even if you were to set a single salary schedule throughout the state, the reality of cost differences would exist because people with higher/lower qualifications may cluster to different regional labor markets. Ask yourself whether you would be indifferent about working in San Francisco, Stockton, Fresno, and Lassen County if you were offered the same compensation in all of these locations.

…there was a growing recognition that additional state aid would be required to meet the needs of diverse student populations.

Need refers to the differential resources required to address the unique socioeconomic or educational circumstances of the students being served (e.g., students living in poverty, with disabilities, and coming from homes where English is not the first language). This component seems to be the most intuitive to the public and policymakers. Students from economically disadvantaged homes simply don't have the same access to educational experiences outside of school as students from wealthier families, not to mention health care, nutrition, and other environmental factors that affect a student's ability to take advantage of schooling.[14] English learners will most certainly need specialized educational approaches and the support of professional staff with bilingual capabilities. (See Chapter 7). Finally, students with disabilities require more intensive support and services to accomplish

the same goals as students without disabilities and to compensate for specific mental, physical, and emotional challenges.

Scale refers to the differences in the cost of offering and providing the necessary outcomes in smaller and more remote communities, as opposed to larger more urbanized ones. Schools in remote, rural regions of the state will not be able to take advantage of the economies of large-scale operation that are available to the more urbanized school systems.[15] Geographic barriers (mountains and rivers) and long distances between communities that make home-to-school transportation infeasible, prevent consolidation and require additional educational resources. The big issue here is to determine the extent to which scale is a matter of choice versus a necessity. The notion is we want to compensate only for those differences in cost that are, for all intents and purposes, outside local control.

How does one go about designing an adequate school funding system? For decades state policymakers have sought advice on how to do just that. While most recognize that price, need, and scale are cost factors, how should these be taken into account …?

Any differences in spending across local education authorities (LEAs) that remain after accounting for price, need, and scale can be attributed to choices to make larger or smaller investments in education by state and local policymakers.

What Does Research Tells Us About Educational Adequacy?

How does one go about designing an adequate school funding system? For decades state policymakers have sought advice on how to do just that. While most recognize that price, need, and scale are cost factors, how should these be taken into account when developing a school funding formula?

To address this issue, it is necessary to understand the relationship between school spending and student outcomes, and to note adjustments in state aid that reflect these cost factors. Educational researchers have struggled for decades trying to ascertain what works in education. The literature has sought to determine the impact on student outcomes of differences in: class and school size (Finn and Achilles, 1999; Grissmer, 1999), teacher training and experience (e.g., Darling-Hammond, 2004), access to preschool programs (Barnett, 1995, 1996, 2000), parental involvement (Henderson, 1998), availability and utilization of technology (Wenglinksy, 1998), and access to various pupil support personnel (Wehlage and Stone, 1996).

While researchers have struggled to determine unambiguously what works in education, they have also recognized that some of the difficulty in doing so results from the complexity of separating out the multitude of family background factors and community characteristics from the effects of schools on student outcomes. The U.S. Department of Education (DOE) has established the Institute for Education Sciences (IES) to promote randomized field trials to encourage more scientific studies of what works in education. Moreover, the DOE has funded research to conduct comprehensive reviews of the literature to summarize what works.[16]

The research to date is far from conclusive and so cannot yet be used to develop school funding formulas. However, it is possible to draw some conclusions about cost differences from the available data, which can at least serve as a starting point for deliberations. Furthermore, much of the literature focuses on a narrow set of schooling outcomes. Many of the studies focus on student achievement test scores, which in many instances are based on multiple-choice tests of children's learning in math and language arts. In some instances, these tests are extended to the natural sciences, history, and other social sciences. What these tests often don't measure are students' creativity, the ability to work in groups to solve problems, their knowledge of music and the arts, their physical condition, and their ability to learn in the future. As Richard Rothstein comments, "To judge schools exclusively by their test results is, therefore, to miss much of what matters in education." [17]

He goes on to suggest the following:

> Obsessed with test scores, educators have devoted almost no effort to identifying or measuring noncognitive outcomes...While public opinion surveys consistently include higher test scores as a school goal, they are not the only goal and apparently not the most crucial. In one such survey, conducted in

> 1994, over two-thirds of Americans said that teaching values was a more important role of public schools than teaching academic subjects; the top rated "value" was teaching students to solve problems without violence. In another recent survey, Americans were asked to rank school purposes; respondents gave their highest rank to preparing responsible citizens; helping students to become economically self-sufficient was second. In yet another pool conducted recently, 80% of respondents said that whether graduates practice good citizenship was a "very important" way to measure schools, but only 50% said test scores were a "very important" way. Thomas Jefferson called upon public schools to provide not only "academic proficiency" but also to "understand duties to neighbors and country, and to observe with intelligence and faithfulness all social relations[18]

Studies by a research team led by Christopher Jencks (1979) found that adult economic success was affected more by years of schooling completed, and noncognitive traits such as leadership ability, than by test scores. Indeed, the Jencks study showed that even children who had completed a greater number of years of school (either high school or college) were more successful in economic life than those with less, even if they had comparable test scores.

If these noncognitive outcomes were linked to cognitive (academic) outcomes and the test scores that presumably measure them, then measuring academic outcomes alone might be sufficient to assess schools. But the very emphasis on the more easily measured academic outcomes resulting from NCLB and the standards-based reform movement may have reduced the correlation between these two outcomes.

Some studies have extended the list of outcomes to include attendance rates, dropout rates, and graduation rates.[19] Others have focused on student participation rates in athletic or extra curricular programs, and yet other studies have measured student satisfaction, self esteem, and sense of self-efficacy.[20]

Indeed, colleges use dimensions other than SAT scores in the admissions process, and there has been significant research on some of the problems with SAT scores as opposed to high school grades and measures of participation in extracurricular activities, student government, autobiographic narratives, and statements of ambitions as measures of potential success in college. Some colleges have even considered dropping SAT scores altogether in favor of alternative measures in the admissions process.[21]

Thus, student test scores are only a part of what schools are about or should be about. However, some psychologists have even questioned whether the test scores themselves are a good measure of what students learn in school. As Professor James Popham of UCLA points out:

> Traditionally constructed standardized achievement tests measure a bit of what's taught in school. But by and large they measure what children bring to school, not what they learn there.
>
> To me, one of the most frightening things about the preoccupation of raising test scores is the message it sends to children about what's important in school. Rather than trying to make the classroom a learning environment where exciting new things are required, the classroom becomes a drill factory, where relentless pressure and practice on test items may raise test scores—but may end up having children hate school.[22]

Education research does provide some insights into factors that contribute to success in schools. For instance, at least one reasonably well-designed experimental study has suggested the positive benefits of smaller class sizes (see Krueger, 1997; Krueger and Whitmore, 2001). In addition, there is some evidence that there are benefits to smaller schools, but this is not universal (Barker and Gump, 1964; Lee and Smith, 1997; Raywid, 1997/1998; and, Ready et al., 2004). There is also quite a bit of evidence that demonstrates the value of preschool programs, such as the recent report by Karoly and Bigelow (2005). Teachers do make a difference, but researchers are not entirely sure what it is about them that makes a difference (Hanushek, 2002).

There has been some evidence that additional investment in special education can have benefits in terms of student achievement for students with

learning disabilities who account for about half of the population of students with disabilities (Hanushek et al., 2002). There have even been studies showing the benefits of higher spending (e.g., Card and Krueger, 1992; Ferguson, 1991; Hedges et al., 1994; Betts, 1996; and, Greenwald et al., 1996). But there have been other studies that reveal inconsistent effects of particular variables and raise the specter of ambiguity in what works (e.g. Coleman, 1966; and, Hanushek, 1986; 1996).

In conclusion, the current research on educational effectiveness has not come far enough that it can tell us definitively what practices and resources are most effective in promoting student success. Moreover, the current research is hardly exhaustive in terms of the types of student outcomes that have been addressed. This is not to say that research does not provide some basis for analyzing educational costs. As will be seen below, the educational effectiveness literature serves as a key element in one of the four main approaches to modeling adequacy. However, with the narrow set of student outcomes used in most education research and the ambiguity in the literature as to what works in schools, it would seem that focusing strictly on educational research is not likely to provide a clear, unambiguous answer on how to design a school funding system.

California's Specific Need for Adequacy Research

Putting forth the argument that money does not matter is not a credible contention. At the same time, to say we could not do better with what we have does not make much sense either. But it seems clear from the data that we, as a state, could do significantly better for our children. One thing is certain: the California schools that children attend today are not the same schools children attended in the 1950s and early 1960s. The recent report by the Rand Corporation (Carroll et al., 2005) and funded by the Hewlett Foundation shows California ranking very low among the 50 states in just about every dimension of education that one could imagine: real spending levels, student achievement scores, NAEP test score results, high school graduation rates, drop-out rates, and the rate of teen pregnancies. Stephen Carroll, the lead author of the report, states:

> A lot of people have expressed concern about the state of K–12 education in California. We found that those concerns are well placed. California schools are lagging behind most other states and these findings suggest policymakers need to make major changes in order to repair the problems. Despite some improvements, the state has a long way to go to reclaim its standing as a national leader in K–12 education.[23]

In 2006 California enrolls more than one in eight of the nation's children (12.8%), almost half (45%) of whom are Hispanic, one in eight of whom are Asian and Pacific Islander (12%), and one in twelve of whom are black (8%). About one of every five children in California lives in a family whose income is below federally established poverty thresholds. Almost four of every ten families (39.7%) headed by a single mother also lives in poverty, and almost one in every three (29.6%) of children live in high-poverty neighborhoods. In the early to mid-1970s, California spent about the same share of its personal income on public education as the rest of the country—about 4.5%—but this has declined to about 3.6% today.[24]

APPROACHES TO MEASURING ADEQUACY

Where then do we turn to measure the cost of an adequate education? How do we define adequacy in school funding? How do we ensure that all students have access to similar educational opportunities? How do we determine what additional resources might be required to address the special needs of certain student populations? How do we ensure that communities in different parts of a state have a reasonable access to schooling services?

Be it a researcher, practitioner, parent, policymaker, or other member of the general public who has looked at resource data or had the opportunity to personally visit school campuses in any state, he or she is sure to have observed vast differences in the access to resources (e.g., teachers, educational specialists, textbooks, computers, classroom facilities, auditoriums, or playgrounds) enjoyed by different communities. This wide variation in access to resources

has been well documented in earlier studies (Carroll et al., 2005; Chambers et al., 1993, 2000).

Four alternative approaches have emerged to estimate the amount of the investment required to offer an adequate education: 1) Professional Judgment, 2) Successful Schools, 3) Evidence-Based Approach (also known as the Expert Judgment), and 4) Cost Function Analysis. All of these approaches have one thing in common: in line with the concept of vertical equity, they all begin from the premise that school funding formulas should be based on the cost of meeting the needs of the students served. As mentioned above, while this notion seems an obvious starting point for thinking about school funding today, two decades ago such decisions were simply based on revenues available, with little or no systematic assessment of goals and objectives and the cost of achieving them.

Professional Judgment Model (PJM)

Drs. Jay G. Chambers and Thomas B. Parrish of the American Institutes for Research (AIR) first pioneered systematic approaches to addressing adequacy and equity in school funding more than 20 years ago in two major school finance reform studies in Illinois (1982) and Alaska (1984). With the notions of developing cost-based school funding, the researchers adapted the Resource Cost Model (RCM) as a method for estimating the cost of an "appropriate" education for all children. The RCM had been previously referred to as the ingredients approach, and was used by Levin (1983) for cost-effectiveness analysis and by Hartman (1979) to project the cost of implementing the Education for All Handicapped Children's Act (predecessor of today's Individuals with Disabilities Education Act, or IDEA) originally passed in 1975. In the Illinois and Alaska studies of the early 1980s, Chambers and Parrish developed an educator-based decision-making process along with the RCM, and that methodology has evolved into what is currently referred to in the literature as the professional judgment approach.

While the early model of Chambers and Parrish was a more input-based model, applications of the Professional Judgment Model (PJM) in the past decade have been output-based. The model has evolved in light of the standards-based reform movement and the emphasis placed on accountability. The original application of the PJM uses panels of educators to design and develop resource specifications of delivery systems for educational services that will provide an adequate school program.[25] Different research teams have applied this model using various methods to select panelists and involve non-education stakeholder panels. In addition, different assumptions have been used about what is included or excluded from the panel modeling exercises (i.e., specification of district versus school-level resources). However, in most applications the panels have included a wide variety of educators, including superintendents, principals, school business officers, and teachers.

One of the most recent applications of the PJM by Chambers et al. (2004) involved designing a base set of resources or prototype for a school with a specific demographic configuration of students, and then modifying the design to fit varying compositions of students.[26] This approach not only provides a total cost estimate for an adequate education, but it shows how this cost varies in relation to pupil needs. Adding supporting cost studies on geographic cost differences and other cost factors for central administration and maintenance and operations services, one can develop statewide projections of costs as well as projections by school and by district based on the varying demographic configurations of students.

Some critics have suggested that the professional judgment approach can lead to rather high cost estimates for adequacy due to the relative freedom of the panels to specify resources without being bound to a budget constraint (Taylor, Baker, and Vedlitz, 2005; Hanushek, 2005).[27] To address this potential criticism, the original approach developed by Chambers and Parrish incorporated checks and balances by including stakeholder panels of non-educators representing various policy constituencies (e.g., local school board members, taxpayers, parents,

MEASURING ADEQUACY:

- Professional Judgment Model
- Successful Schools Model
- Evidence-Based Approach
- Cost Function Analysis
- Multiple Model/ Hybrid Approach

legislative representatives, representatives of the governor's office, and members of the business community. Their charge was to review the work and provide feedback directly to the professional judgment panels (PJPs). The PJPs are told up front that they will be asked to defend their work and respond to feedback from the stakeholder panel. By insisting that the PJPs must defend and justify their recommendations and specifications, the stakeholder panel provides somewhat of a check on the system. The stakeholder panel requires the educators to become accountable within the professional judgment process.

The most recent application of the professional judgment approach (Rose et al., 2004 and Sonstelie, 2005) does not use panels of educators per se, but rather samples of individual educators who are asked to complete a spreadsheet listing various school resources and their prices.[28] This approach takes the educators through exercises that specify the composition of pupil needs, the budget of the school, the types of staffing and resource inputs with which they have to work, and then asks them to specify the quantities of resources within the budget constraint to maximize student outcomes (e.g., the Academic Performance Index in California). By varying the budget and composition of students, they can predict the relationship between predicted outcome levels by the educators, the costs, and the pupil needs.

There is a great deal of conflicting evidence on the impact of various resources on student performance (e.g., teacher certification, experience, and educational preparation), as well as the impact of service delivery models.

This new approach was devised to address two weaknesses of the original professional judgment approach. First, previous studies simply asked professionals what they thought schools needed, regardless of prices or budget. Second, previous studies "tend to involve groups of professionals working together to come up with the resources an ideal school would contain" and "these group sessions obscure the variation among individuals in the resources they think are needed to reach some target." [29]

Successful Schools Model

Almost a decade after the early studies of school finance adequacy by Chambers and Parrish (1982, 1984), Augenblick (1997) developed the successful schools approach to estimate the costs of an "adequate" education. Based on this model, Augenblick has worked with states to identify schools and districts that, based on certain specific criteria, were found to be highly successful in regard to student performance. The cost of adequacy was then estimated based on the expenditures of these high performing districts and schools.

Unfortunately the manner in which the Successful Schools Model is generally applied does not account for variation in the demographic and need characteristics of students. Consequently, the high performing districts and schools were generally those with access to more resources. Also, this approach is not well suited to provide estimates of what is required to serve different populations of students with respect to poverty, English language proficiency, and disability characteristics. In effect, the model provided no inherent mechanism for determining the marginal or incremental costs of meeting the needs of special populations of students. Nevertheless, this approach did provide an initial benchmark for cost estimation.

A more recent modification of this model involves the use of a beating-the-odds (BTO) analysis. This approach uses econometric techniques to identify schools that are performing better than expected given the populations of students they serve. Thus, it uses statistical methods to compare schools serving comparable populations and then identifies the best of each group of schools. One can then obtain detailed information about the resources and instructional practices of the best schools in order to estimate costs.

There are a number of limitations to the BTO model. First, it is difficult to estimate the cost of achieving very high standards because few, if any, of the schools serving the most challenging student populations are achieving at these levels. Second, in those rare instances where such schools are achieving at high levels, there are often idiosyncratic resources that cannot be easily replicated, or the student populations attending the school are systematically different than those at similar schools. In the first case, the school could have an exceptional principal with extraordinary

leadership skills and charisma that motivates the staff. These kinds of factors are inherently difficult to measure and likely have any easily estimable cost implications. In the second case, one often finds that these schools are magnet programs or the students are self-selected through some mechanism that distinguishes them from students at the other schools. Third, the BTO model is limited by the use of readily available measures of school performance, which are for the most part test scores.

Evidence-Based Approach

In recent years, an approach called the Evidence-Based (EB) Approach has been put forth uses models drawn from the literature in education research on effective schooling practices to estimate the cost of achieving adequacy in school funding. While there is much to be said for the concept of an evidence-based approach to cost estimation, educational research is unclear regarding effectiveness. As suggested above, there is a great deal of conflicting evidence on the impact of various resources on student performance (e.g., teacher certification, experience, and educational preparation), as well as the impact of service delivery models (e.g., small versus large class sizes or schools). For this reason, this approach is very sensitive to the selection of literature chosen to serve as a foundation for cost analysis. This model tends to promote a "one size fits all" approach and is not very sensitive to the differential objectives (outcome levels) that might be specified by state law or policymakers.

Nevertheless, the notion of using what evidence is available as a starting point for further deliberations and cost analysis has merit. But this means that for the approach to be functional, it must be combined with some sort of professional judgment application that offers local educators an opportunity to make appropriate adjustments to meet their needs. Moreover, because the literature on what works is so thin, the EB approach does not naturally lead to any direct estimates of the marginal costs of serving various special needs student populations in the way the professional judgment approach permits.

Cost Function Model

Some economists have contributed to the school finance adequacy literature by using econometric models to estimate what they refer to as cost functions.[30] These econometric models are simply adaptations of the types of cost models that economists have used for decades to analyze data from manufacturing and other production processes in private industry. The models relate total production costs to outcomes, input prices (e.g., teacher salaries), and demographic characteristics that reflect pupil needs and assume optimization behavior on the part of the key decision makers (e.g., output maximization or cost minimization decision-making processes). This approach provides a systematic way to explore the relationship between educational costs and student outcomes, while controlling for input prices and other factors affecting educational production.

That being said, there are several drawbacks to the cost function model. It relies on a limited set of outcome measures (e.g., usually one index of average district achievement). Furthermore, the approach does not provide a very transparent perspective on how the inputs are organized and utilized, and is generally difficult to explain to non-researchers such as legislators and policymakers. Also, cost functions provide little information to help policymakers understand the factors underlying the differences in costs.

The cost function model requires fairly large samples of districts to estimate stable statistics, and this requirement makes it difficult to apply in many states with limited numbers of districts. Often the models become complex, requiring the estimation of numerous statistics to determine the cost impact of attaining various outcome measures (e.g., test scores, attendance rates, graduation rates). In turn, the data requirements associated with running these models are quite large. For instance, to be complete the models should ideally control for the various categories of students served (e.g., percent in poverty, English learners, or with various disabilities), school input prices (e.g., for teachers, school administrators, aides), measures of district size (e.g., enrollment and enrollment squared), and environmental factors (e.g., density of student populations). Complex functional forms can also substantially increase the number of independent variables used and reduce the ability to interpret the statistics directly. To estimate these parameters generally requires a state with a few hundred school districts and data spanning a period of three to five years.

An additional criticism of the econometric approach is that it often must resort to cost projections based on outcomes and student demographic combinations that are well beyond the sample from which the model was estimated econometrically. For example, statistical models can be used to project the expected cost of producing a given high level of achievement for a student population facing extreme economic disadvantage or other characteristic needs (i.e., incidence of special education or English learner students). In reality, however, schools with such extreme need characteristics that also exhibit such high levels of achievement might not exist! In this case, much faith must be put into the ability of the statistical model being used to reliably predict what it will take to produce achievement well beyond what is currently observed in schools. This point is especially salient, as the outcome objectives established by the states for adequacy studies are generally well beyond the observed performance of most (or all) of the school districts within a state.

Given that schools are a public enterprise operating outside the context of a market to motivate behavior, some economists might question the applicability of the econometric approach. The notion here is that there is no motivation for school district decision makers to maximize outcomes for any given budget constraint or minimize the budget necessary to achieve a certain outcome. The advent of NCLB may have altered this motivation somewhat through the public embarrassment of school decision makers for failing schools.

While using this model can provide some interesting comparisons, the complex assumptions on which it is based, the limited outcomes usually considered, and the significant data requirements necessary to implement the model make it, for the most part, an impractical approach to conducting work on adequacy. Where this approach would seem most useful is in combination with other approaches to check for consistency of cost estimates.

Multiple Model Studies and Hybrid Approaches

More recent adequacy studies by the various research teams have presented adequacy estimates stemming from multiple methodologies or have used combinations of the above approaches to come to an estimate. For example, Augenblick and Meyers (2001, 2002, 2003) use both the Successful Schools and Professional Judgment approaches to obtain separate estimates of the cost of an adequate education in the states of Kansas, Maryland, and Missouri. Odden et al. (2003b) have begun studies using the matrix of resources based on the Evidence-Based approach, but then have appointed a professional judgment to review the matrix and make adjustments.

Chambers et al. (2004, 2006) report on one of the most comprehensive studies of adequacy conducted in New York State by a team led by the American Institutes for Research (AIR) and Management Analysis and Planning (MAP). This model included an elaborate public engagement component implemented by the Campaign for Fiscal Equity in New York, in which input from a wide variety of constituencies was collected about the desired goals and types of resources necessary to achieve the desired results.

In addition to public engagement, the New York study combined elements of Evidence-Based and beating-the-odds approaches. Beating-the-odds analyses were conducted for two purposes: 1) to identify schools from which some of the participants on the professional judgments were selected, and 2) to develop comparative information on the staffing and resource allocation patterns that existed in high- versus average-performing schools. The results of the analyses were to be presented to a review team selected from the professional judgment panels.

The Evidenced-Based approach was utilized by developing a brief, well-balanced review of the existing education literature on "what works." This review identified educational practices that had been shown by some of the literature to have positive effects on student outcomes, but also presented (when available) alternative views on these effects. The purpose was to provide something for the members of the professional judgment panels to consider prior to their deliberations.

The New York study included eight independent panels from four different categories of school districts to ensure that the analysis did not rely on the specifications of any one panel.[31] A second stage panel was also selected to review the synthesis of the analysis conducted by the research team, to help interpret the data, and to make any necessary revisions.

Concluding Remarks on Cost-Based Funding

The value of these approaches lies not so much in offering a final answer to the question of adequacy. In

fact, most research teams, regardless of what approach they use, don't present just one estimate to their clients. They often run simulations that offer a range of numbers based on varying assumptions. In the New York study, for example, different cost estimates were presented at the different stages of the process. These included estimates based on initial specifications of the panels and those after they had made some modifications, as well as differential assumptions about how central administration, maintenance and operations, and other cost components were accounted for in the analysis.

These types of analyses may provide a starting point for discussion and debate over how best to fund schools. They present a systematic set of numbers on which policymakers can base state aid allocations. They offer a rational basis for resources to be distributed in such a way as to promote vertical equity, rather than just allocating whatever dollars may be available after money is first allocated to other social services. No matter which approach is selected, the numbers that are derived are based on some analysis of existing spending or resource allocation patterns, and/or determinations of what resources may be necessary to achieve the desired results for the public education system.

Some states have conducted multiple adequacy studies, in some cases by completely different research teams, and there is something to be said for that approach. It provides some options for consideration by the legislature and allows comparisons across models to see how close the numbers are. But it is critical that these studies proceed to some degree outside the reach of the political process. While the use of public engagement and stakeholder panels seek widespread input into the analysis, the results need to be insulated from any attempt to limit the findings to what is politically acceptable.

There is also a need to be honest about setting the goals of public education and in designing a structure to meet those goals, even if the cost estimate derived may not be politically feasible at any given point in time. We can at least establish an objective systematic picture of what it will take to achieve the desired outcomes, and then work toward making the funding available. In establishing this dialogue with the public, it is necessary to be honest with the citizenry of the state about what it will take to achieve adequacy as defined by a consensus-based educational goal.

POLICY IMPLICATIONS

Implementation Phase-In

It is very important to implement the kinds of potentially major changes in school funding that may be recommended as part of an adequacy study in a very deliberate way. It is extremely difficult to accomplish this kind of change in a short period of time. School districts and the state must go through a significant planning process with the end goal in mind. New teachers may have to be trained by the higher education system. Incentives must be provided to help reduce turnover among existing staff, and higher salaries may be required to induce additional people into the market for these jobs.

New classroom space may be required to meet programmatic needs, and this will involve spending additional dollars on facilities. For example, if the adequacy estimates are based on smaller class sizes or smaller pupil staffing ratios, additional facilities will be necessary to house all of the additional classrooms and offices for professional staff.

The state needs to work in concert with local school district decision makers to make this process as smooth as possible. For instance, if money is to be added to the system in order to increase staffing, it must be done in a deliberate way to ensure that certification standards for new personnel can be satisfied as the instructional programs are expanded. It has been suggested that such a lack of foresight and planning severely limited the effectiveness of California's recent, well-intended, large-scale reform, statewide class size reduction. Although resources were made available for hiring additional instructional staff, school districts were unable to recruit and employ enough qualified teachers in the short period of time they were given. As a result, the level of teacher quality suffered,

and the program failed to deliver the hoped for improvements in student outcomes.[32]

The bottom line is that changes in funding need to be phased into the system to provide state and local officials with sufficient time to plan on how best to allocate new dollars or cut old programs, to meet existing standards, and to improve the quality of instructional programs.

Adequacy as a Policy Process

It is important to recognize that "costing out" adequacy in education is not a science. It is a process of organizing the best data available to arrive at a reasonable estimation of what it might cost to provide an "adequate" education. To be sure, sophisticated analytic tools can be brought to bear upon the process, but the estimation of the costs of an "adequate" education is more of a quest than an endpoint on a journey. Thus, it is inappropriate for courts or policymakers to seize upon any particular estimate as the only one worthy of being "adequate." There remains a role, an appropriate zone of local discretion, for policymakers to weave their judgments into the amalgam of costing out facts and research outcomes.

These studies of adequacy will arrive at alternative instructional designs and models by which schools can achieve adequacy or excellence in education. Researchers will then be able to impute costs to these instructional models. However, it would be a mistake to translate whatever instructional model might support the cost analyses into a mandate for local districts and schools to spend revenues.

However insightful these instructional designs may seem, and however persuasive a case is made for their effectiveness, education continues to be more of an art than a science. Thus, there is a need to harness continually the creativity and experience of local educators in any state in order to achieve the higher levels of student outcomes that virtually everyone desires. Because local educators remain central to achieving educational adequacy, they must be given a wide swath of discretion to determine how money should be used in order to achieve a wide range of student outcomes, including higher achievement test performance, improved attendance rates, higher graduation rates, increased participation in extra curricular activities or student government, and decreased drop-out rates.

In many instances, adequacy studies are conducted to provide a comprehensive cost estimate for achieving educational adequacy within a state. To do this, one has to conduct the analysis by ignoring current revenue streams from the federal, state, and local governments. Here, the goal is to determine the total cost for a given outcome level without regard to where the funds might come from to support this effort. What this means is that analysts must address how these cost estimates will later interact with existing federal funding programs such as Title I, the Individuals with Disabilities Education Act (IDEA), and other funding streams. Analysts will also need to take into account the fact that many of these federal programs do not supplant existing funding streams, but instead require that states and local school districts contribute their fair share to supplement the awarded funds.

Schools Can't Do it Alone

The success of schools also depends on other individuals and institutions to provide the health and nutritional services, the intellectual stimulus, and family supports upon which public school systems can build. Schools cannot and do not perform their role in a vacuum, and this is an important qualification for all conclusions reached in any study of adequacy in education. As Rothstein (2004) points out:

■ Closing the gaps (between the achievement of lower-class and middle-class children) requires not only better schools, although those are certainly needed, but also reform in the social and economic institutions that presently prepare children to learn in radically different ways. It will not be cheap.

■ Raising the achievement of lower-class children requires abandoning the illusion that school reform alone can save us from having to make the difficult economic and political decisions that the goal of equality inevitably entails.

However, even with the narrow focus on schools themselves, the types of adequacy studies described above offer no guarantees of improved performance. The success of schools depends not only on providing the necessary resources to achieve the results, but on the effective use of those resources by local school systems. This means developing appropriate incentive and accountability structures to increase the likelihood that schools will use resources productively.

Current Studies of School Finance Adequacy in California

With respect to furthering the investigation of educational adequacy in the California public school system, we are in the midst of an exciting and historic time. Four foundations are currently funding a suite of studies to address school finance reform in the state of California. The goal is not only to provide alternative estimates of the costs of adequacy, but also to help increase the likelihood that whatever resources reach the schools will have the desired impact.[33] The collection of studies being done for the State of California includes the following:

- defining adequacy
- costing out studies using alternative approaches
- teacher cost differences
- studies of English language learners
- lessons from other states
- alternative sources of funds
- structures of governance
- contracts and teacher assignment
- fiscal substitution across non-education government spending
- business office personnel and policies
- state teacher policy
- data availability and transparency.

Few states have the opportunity or the fiscal resources to conduct a collection of studies encompassing all of the components listed above. While each of the studies will be done by separate teams of researchers, the foundations have provided for a centralized structure to coordinate and mange the distribution of research funds for the studies, and will be responsible for synthesizing the results of these studies and then disseminating them to policymakers. Moreover, the studies are being conducted at the request of various constituencies of the state government, but at the same time are under the control of the foundations. This provides for a significant amount of independence, shields the studies from political pressure, and increases the likelihood that the findings will be objective.

In most states, adequacy cost studies are conducted quite independently of other types of studies, and minimal thought is given to some of the other significant issues such as governance, which is so critical to success when implementing policy changes. Moreover, the kinds of resources required to conduct thorough costing out studies are substantial. While it is rare for states to invest even as much as $500,000 in educational studies, a significantly larger investment is required to complete more comprehensive studies with a broader set of dimensions, public engagement, and various checks and balances built into the analysis.

Given the costs, it would seem that there may well be a role for some federal assistance in conducting this kind of research. The No Child Left Behind (NCLB) Act requires all states to establish standards and accountability systems against which to measure the performance of public schools. Moreover, NCLB has established a timeline which requires that all students achieve proficiency on the established state standards by the 2013–14 school year. Given that states, school districts, and schools across the nation are expected to meet the requirements of NCLB in the near future, it is essential that they have available to them estimates of the cost of reaching these goals.. This begs the question of what level of investments of federal, state, and local resources will be needed to provide a fair opportunity for all public school students to meet these proficiency goals by 2013–14.

It is evident that good answers to these questions require a range of studies in addition to the costing-out research studies that many states are funding. While it is tempting to consider ways in which states could share resources and conduct joint studies, this would require establishing some areas of common ground where cross state studies could serve the purposes of many states. In fact, many of the studies that have already been carried out on adequacy related to school governance, analyses of geographic cost adjustments, analyses of the cost of school facilities, and home-to-school transportation could be carried out across multiple states.

A possible avenue for the proliferation of this work nationwide would be for the federal government to establish regional research centers for the investigation of adequacy and equity in school funding. Such centers could have at least two benefits. First, the centers could be designed to encourage consortiums of researchers currently working in this arena to collaborate in their efforts across states to improve the efficiency with which these studies could be carried out. And second, the centers would facilitate an increase in the comprehensiveness of the types of studies supporting school finance reform across the nation.

APPENDIX A: Litigations Challenging Constitutionality of K–12 Funding in the 50 States

In Process (23)		No Current Lawsuit (22)		Never Had a Lawsuit (5)
Alaska	Nebraska	Alabama	Ohio	Delaware
Arizona	New Hampshire	California	Oklahoma	Hawaii
Arkansas	New Jersey	Florida	Oregon	Mississippi
Colorado	New Mexico	Illinois	Pennsylvania	Nevada
Connecticut	New York	Indiana	Rhode Island	Utah
Georgia	North Carolina	Iowa	South Dakota	
Idaho	North Dakota	Louisiana	Vermont	
Kansas	South Carolina	Maine	Virginia	
Kentucky	Tennessee	Massachusetts	Washington	
Maryland	Texas	Michigan	West Virginia	
Missouri	Wyoming	Minnesota	Wisconsin	
Montana				

Source: Molly A. Hunter, Litigations Challenging Constitutionality of K–12 Funding in the 50 States (Campaign for Fiscal Equity, Inc. 2005)

APPENDIX B: School Funding "Adequacy" Case Decisions Since 1989

Plaintiff Victory (21)		State Defendant Victory (7)	Pending (9)
Alaska	New Hampshire	Alabama	Alaska*
Arizona	New Jersey	Florida	Arizona*
Arkansas	New Mexico	Illinois	Colorado
Georgia*	New York	Massachusetts (2005)†	Connecticut
Idaho*	North Carolina	Pennsylvania	Kentucky*
Kansas	Ohio	Rhode Island	Louisiana
Kentucky	South Carolina*	Texas (2005)†	Missouri*
Maryland	Texas (1989)†	Nebraska	
Massachusetts (1993)†	Vermont	North Dakota	
Missouri	Wyoming		
Montana			

This chart reflects the highest state court's decisions or un-appealed lower court decision.
*Alaska and Arizona plaintiffs won capital funding cases; operational funding cases are pending. Kentucky and Missouri plaintiffs won new funding systems years ago; new suits allege that those systems have changed and become unconstitutional. Georgia's high court denied state's motion to dismiss and remanded for trial.
†Massachusetts and Texas have each had two high court adequacy cases.
Source: Molly A. Hunter, Litigations Challenging Constitutionality of K–12 Funding in the 50 States (Campaign for Fiscal Equity, Inc. 2005)

ENDNOTES

[1] Quote taken from February 2005 article, "California's school funding went from first to among the worst. What went wrong?" *California Educator* 9(5): 6–21.

[2] Actually, the study by Timar (2004) states that in 2000–01 there were 124 categorical programs, which provided $113 billion of educational funding. However, the author is careful to point out, "The exact number of categorical programs is debatable due to differences in the definition of categorical programs." Funding for programs outside K-12 like preschool, childcare, and Adult Education are categoricals.

[3] An example of this is the passing of Assembly Bill 825 in 2004, which consolidated over 20 existing categorical education programs into six categorical block grants.

[4] For an example, see the study by Clune (1994).

[5] Appendix A.1 includes a list of states involved in litigation over the constitutionality of their school finance systems.

[6] Appendix A.2 contains a list of school funding adequacy case decisions since 1989.

[7] It must be noted that, while the incentive structure instituted by NCLB's accountability system focuses on ensuring that all students achieve at state-mandated levels of proficiency, the act offers little assistance to states in the way of technical direction or additional funding to achieve these achievement goals.

[8] See http://www.edsource.org/pdf/Oakes_et_al_Accountability.pdf., pages 1,3.

[9] Quote taken from Allen (2005), page 10.

[10] See http://home.att.net/~pcbworks/TandI.html for a discussion.

[11] See McKinley (2005a, b) for a full discussion.

[12] See Supreme Court Of The State Of New York, County Of New York, Campaign For Fiscal Equity, Inc., et al., Plaintiffs, -against- THE STATE OF NEW YORK, et al., Defendants. Index No. 111070/93,m Justice DeGrasse, J.

[13] For instance, see Brazer (1974), Grubb and Hyman (1975), and Chambers (1978, 1980, 1981a, b).

[14] For a more detailed examination of the impact of socioeconomic status on schools, see Rothstein (2004).

[15] Clearly, the argument can be made that there may also be diseconomies to scale (i.e., where per-pupil costs *increase* with size) for extremely large urban districts. However, we assume here that the number of districts currently operating on this scale make these cases rather exceptional.

[16] Two IES-sponsored projects currently being conducted by the American Institutes for Research (AIR) are the What Works Clearinghouse (http://www.w-w-c.org/) and the Comprehensive School Reform Quality Center (http://www.csrq.org), which address the effectiveness of various types of educational interventions and comprehensive school reforms, respectively.

[17] Rothstein (2004), page 86.

[18] ibid, 95-96.

[19] For instance, Sander and Krautmann (1995) and Evans and Schwab (1995) consider the effect of attending Catholic school on the probability of graduation and total educational attainment, while Neal (1997) also considers its effect on wages.

[20] For an example, see Schunk and Hanson (1987), for analysis of the effect of peer modeling on student self-efficacy and achievement.

[21] See Richard C. Atkinson (2002), The Changing World of College Admissions Tests, http://www.ucop.edu/pres/comments/wacubo.htm and California Colleges May Drop SAT Use, by Shankar Mukherji, http://www-tech.mit.edu/V121/N5.5/55SAT.5.5n.html.

[22] Quotes from James Popham of UCLA in an interview on the public broadcasting system radio show, "Frontline:" http://www.pbs.org/wgbh/pages/frontline/shows/schools/interviews/popham.html.

[23] Quote taken from report press release, retrievable at http://www.rand.org/news/press.05/01.03.html.

[24] Though these statistics draw from different data sources, the point here is to show changes over time. See page 53 of RAND report California's K-12 Schools: How Are They Doing (2005) which shows in figure 3.14 that the percentage of personal income in 2000 was approximately 3.6%, while just under 4.5% in 1970. As noted in the report (note 32) The discrepancy between the estimate of California,s school spending as a percentage of personal income presented in Figure 3.13 and the comparable ratio presented in Figure 3.14 reflects differences in the data sources we used. The data for Figure 3.13 were taken from the U.S. Census Bureau, which uses its own annual survey of government finances; the data for Figure 3.14 were taken from NCES, which uses the common core survey data. These two surveys define state public elementary and secondary school spending differently, the Census Bureau using state public school "finance amounts" and NCES using state public school "spending." The difference lies in the fact that actual spending for a year might be lower than what is initially financed. We cannot use the Census Bureau data for Figure 3.14 because they do not go back to 1970. However, because the Census data are commonly used for ranking states in terms of the ratio of public school per-pupil spending to personal income, we elected to use them for Figure 3.13.

[25] One of the most recent applications of the Professional Judgment Model (PJM) may be found in Chambers et al. (2004). For other recent applications of PJMs, see Guthrie et al. 1997; Augenblick and Meyers (2001); and Verstegen (2004).

[26] The report is available for download at http://www.cfequity.org/FINALCOSTINGOUT3-30-04.pdf.

[27] Another perspective suggests that the cost estimates may be driven largely by the level of the educational objective provided to the professional judgment panels to guide their deliberations.

[28] This approach is also being applied currently to measuring the cost of an adequate education in California by PPIC, and the study is being led by Jon Sonstelie of UC Santa Barbara and PPIC.

[29] The concern stemming from the first criticism is that the traditional model does not account for relative prices and budgets in the decision-making process. While there is some merit to this critique, the traditional approach that has been applied, for example, by Chambers et al. (2006) and others, actually does nothing more than turn the optimization problem faced by the professional judgment panels on its head. While the Rose/Sonstelie PJM chooses to maximize the outcome achieved for a given budget, the traditional application of the PJM used by Chambers et al (2006) sets the outcome level objective and asks what minimum cost combination of resources would be required to attain that goal. While explicit consideration of prices could be a useful addition to the deliberations, most of the educators who participate in these panels have a pretty good idea of the relative costs of teachers and aides, and are likely to take this into account in their deliberations.

The second criticism can actually be viewed as an advantage of the traditional approach. Organizing a diverse group from a wide variety of educators (i.e., superintendents, teachers, business officers, etc.) offers diverse perspectives on the design of the school prototypes and the associated decisions about resource allocation in relation to pupil needs. The notion here is that there is value in the synergies among the educators that might be created within the group exercises, especially given the complexity of the process in making judgments about what resources might be needed to achieve the goals and objectives. Moreover, the panels of educators are being asked to go beyond mere resource specifications to think about the design of the instructional programs. While there is significant uncertainty in the processes of resource allocations that may lead to the outcomes, there is some advantage in drawing on the experience and expertise of a variety of education professionals working together.

[30] See the following for examples of cost function analyses of adequacy: Duncombe and Yinger (2000); Duncombe (2002); and Reschovsky and Imazeki (2001).

[31] District categories were defined largely by urbanicity of district (New York City, the other four large cities, and suburban and rural districts).

[32] See, for example, evaluations of California's class size reduction program by Jepsen and Rivkin (2002) and Wexler et al. (1998). The latter is downloadable at: http://www.wested.org/policy/pubs/full_text/class_size/sect1.htm.

[33] The William and Flora Hewlett Foundation is leading the effort along with the Bill and Melinda Gates Foundation, the Stuart Foundation, and the Irvine Foundation.

REFERENCES

Allen, B. (2005). The Williams v. California settlement: The first year of implementation. ACLU Foundation of Southern California and Public Advocates, Inc. Retrieved May 12, 2006 from http://www.decentschools.org/settlement/WilliamsReportWeb2005.pdf

Andrews, M., Duncombe,W. &Yinger, J. 2002. Revisiting economies of size in American education: Are we any closer to a consensus? *Economics of Education Review*, *21*, 245-262.

Augenblick, J., Myers, J., Silverstein, J. & Barkis, A. (2002). *Calculation of the cost of a suitable education in Kansas in 2000-2001 using two different analytic approaches*. Denver, CO: Augenblick and Myers, Inc. Prepared for the Kansas Legislative Coordinating Council.

Augenblick, J. & Myers, J. (2001). *Calculation of the cost of an adequate education in Maryland in 2000-2001 using two different analytical approaches*. Denver, CO: Augenblick and Myers, Inc. Prepared for Maryland Commission on Education Finance, Equity, and Excellence.

Augenblick, J. & Myers, J. (2003). *Calculation of the cost of an adequate education in Missouri using the professional judgment and the successful school districts approaches.* Denver, CO: Augenblick and Myers, Inc. Prepared for Missouri Education Coalition for Adequacy.

Barker, R. & Gump, P. (1964). *Big school, small school: High school size and student behavior*. Stanford, CA: Stanford University Press.

Barnett, W.S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. *The Future of Children: Long-Term Outcomes of Early Childhood Programs, 5*, 25-50.

Barnett, W.S. (1996). *Lives in the balance: Age-27 benefit-cost analysis of the High/Scope Perry preschool program.* Yspilanti, MI: High/Scope Press.

Barnett, W.S. (2000). Economics of early childhood intervention. In Shonkoff, J. & Meisels, S. (Eds.), *Handbook of early childhood intervention* (2nd ed.). Cambridge: Cambridge University Press.

Birman, B.F., Desimone, L., Porter, A. & Garet, M.S. (2000). Designing professional development that works. *Educational Leadership, 57*, 28-33.

Brazer, H. E. (1974). Adjusting for difference among school districts in the costs of educational inputs: A feasibility report. In *Selected Papers in School Finance*. Washington, DC: Department of Health, Education, and Welfare, Office of Education.

Betts, J. (1996). Is there a link between school inputs and earnings? fresh scrutiny of an old literature." In Burtless, G. (Ed.), *Does money matter? The effect of school resources on student achievement and adult success* (pp. 141-91). Washington, D.C.: Brookings Institution.

Card, D. & Krueger, A. B. (1992). Does school quality matter? Returns to education and the characteristics of public

schools in the United States. *Journal of Political Economy, 100(1)*, 1-40.

Carroll, S. J., Krop, C., Arkes, J., Morrison, P. A. & Flanagan, A. (2005). *California K–12 public schools: How are they doing?* RAND Research Report. Santa Monica, CA: RAND.

Chambers, J. G. (1978). Educational cost differentials and the allocation of state aid for elementary/secondary education. *The Journal of Human Resources, 13(4)*.

Chambers, J. G. (1980). The development of a cost of education index: Some empirical estimates and policy issues. *Journal of Education Finance, 5(3)*, 262–281.

Chambers, J. G. (1981a). Cost and price level adjustments to state aid for education: A theoretical and empirical review. In Forbis Jordan, K. (Ed.), *Perspectives in state school support programs, second annual yearbook of the American Educational Finance Association.* Cambridge: Ballinger Publishing Co.

Chambers, J. G. (1981b). The hedonic wage technique as a tool for estimating the costs of school personnel: A theoretical exposition with implications for empirical analysis. *Journal of Education Finance, 6(3)*, 330–354.

Chambers, J. G. & Fowler, W.J. (1995). *Public school teacher cost differences across the United States* (Report No. 95-758). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Chambers, J.G., Parrish, T.B., Levin, J.D., Smith, J.R., Guthrie, J.W., Seder, R.C. & Taylor, L. (2004, March). *The New York Adequacy Study: Determining the cost of providing all children in New York an adequate education – final report*. Palo Alto, CA: American Institutes for Research.

Chambers, J., J. Levin, & Parrish, T. (Forthcoming, 2006). Examining the relationship between educational outcomes and gaps in funding: An extension of the New York Adequacy Study. *Peabody Journal of Education*.

Chambers, J. G. & Parrish, T. (1982a). *The issue of adequacy in the financing of public education: How much is enough?* (Report No. 82–A19). Stanford, CA: Stanford University, Institute for Research on Educational Finance and Governance.

Chambers, J. G. & Parrish, T. (1982b). *The development of a resource cost model funding base for education finance in Illinois*, Volume I B executive summary, and Volume II B technical report). Stanford, CA: Associates for Education Finance and Planning. Prepared for the Illinois State Board of Education.

Chambers, J. G. & Parrish, T. (1983). *Adequacy and equity in state school finance and planning: A resource cost model approach.* Stanford, CA: Stanford University, Institute for Research on Educational Finance and Governance.

Chambers, J. G. & Parrish, T. (1984). *The development of a program cost model and a cost-of-education index for the state of Alaska: Final report.* Volumes I–IV. Stanford, CA: Associates for Education Finance and Planning, Inc.

Chambers, J.G. & Parrish, T. (1986a). *The AEFP/RCM documentation for Version 86.4* (prepared to support users of the AEFP/RCM System Computer Simulation Programs). Mountain View, CA: Associates for Education Finance and Planning, Inc.

Chambers, J. & Parrish, T. (1986b). *The RCM as a decision making process*. Prepared for the Institute for Research on Educational Finance and Governance under a grant from the National Institute of Education.

Chambers, J.G. & Parrish, T. (1985a). *The RCM: A resource management and program budgeting approach for state and local educational agencies*. Stanford, CA: Stanford University, Institute for Research on Educational Finance and Governance.

Chambers, J.G. & Parrish, T. (1985b). *The RCM system: Plans for marketing and dissemination.* Stanford, CA: Stanford University, Institute for Research on Educational Finance and Governance.

Chambers, J., Parrish, T., Levin, J., Guthrie, J., Smith, J. & Seder, R. (2004). The New York Adequacy Study: Determining the cost of providing all children in new york an adequate education. American Institutes for Research (AIR)/Management Analysis and Planning (MAP). Prepared for the Campaign for Fiscal Equity (CFE).

Chambers, J.G., Goertz, M., Marder, C., Padilla, C. & Parrish, T. (1993). *Translating dollars into services: Chapter 1 resources in the context of state and local resources for education.* Palo Alto, CA: American Institutes for Research. Prepared for the U.S. Department of Education.

Chambers, J.G., Stullich, S., Lieberman, J., Parrish, T., Kaleba, D. & Van Campen, J. (2000). *Study of education resources and federal funding: Final report, executive summary, and technical appendix*. Washington, DC: U.S. Department of Education, Office of the Under Secretary.

Clune, W. H. (1994). The shift from equity to adequacy in school finance. *Educational Policy, 8(4),* 376-394.

Coleman, J. (1966). *Equality of educational opportunity*, Prepared for US Department of Health, Education, and Welfare, Office of Education, Washington D.C.

Coons, J. E., Clune, W. H., & Sugarman, S. D. (1970). *Private wealth and public education*, Cambridge, MA: Harvard University Press.

Darling-Hammond, L. (2004). Inequality and the right to learn: Access to qualified teachers in California's public schools. Teachers College Record, 1936-1966.

Downes, T. A. (1992). Evaluating the impact of school finance reform on the provision of public education: The California case. *National Tax Journal, 45(4),* 405-419.

Duncombe, W. D. & Yinger, J.M. (1999). Performance standards and education cost indexes: you can't have one without the other. In Ladd, H.F., Chalk, R. & Hansen, J.S. (Eds.), *Equity and adequacy in education finance: Issues and perspectives* (pp. 260-297). Washington, DC: National Academy Press.

Duncombe, W. D., Lukemeyer, A. & Yinger, J. (2003). Financing an adequate education: A cost study of New York. In Fowler, W.F. Jr. (Ed.), *Developments in school finance 2001-02* (pp. 127-154). Washington, DC: U.S. Department of Education.

Evans, W. N. & Schwab, R. M. (1995). Finishing high school and starting college: Do Catholic schools make a difference? *Quarterly Journal of Economics, 110*, 941-974.

Ferguson, R. F. (1991). Paying for public education: New evidence on how and why money matters. *Harvard Journal on Legislation, 28 (2)*, 465-498.

Finn, J. D. & Achilles, C. (1990). Answers and questions about class size: A statewide experiment. *American Educational Research Journal, 27(3),* 557-77.

Greenwald, R., Hedges, L.V. & Laine, R. D. (1996). The effect of school resources on student achievement. *Review of Educational Research, 66(3),* 361-396.

Grissmer, D. (1999). Class size effects: Assessing the evidence, its policy implications, and future research agenda. *Educational Evaluation and Policy Analysis, 21,* 231-248.

Grubb, W. N. & Hyman, J. (1975). Constructing teacher cost indices: Methodological explorations with California unified school district. In *Selected Papers in School Finance, 1975*. Washington, DC: U.S. Department of Health, Office of Education, and Welfare.

Guthrie, J. W., Hayward, G. C., Smith, J. R., Rothstein, R., Bennett, R. W., Koppich, J. E., Bowman, E., DeLapp, L., Brandes, B. & Clark, S. (1997). A proposed cost-based block grant model for wyoming school finance. Sacramento, CA: Management Analysis and Planning Associates, L.L.C.

Hanushek, E. A. (1986). The economics of schooling: Production and efficiency in public schools. *Journal of Economic Literature, 49(3),* 1141-1178.

Hanushek, E. A. (1996). School resources and student performance. In Burtless, G. (Ed.), *Does money matter? The effect of school resources on student achievement and adult success* (pp. 43-73). Washington, D.C.: Brookings Institution.

Hanushek, E. A. (2002). Teacher quality. In Izumi, L & Everson, W. (Eds.), *Teacher quality* (pp. 1-12). Stanford, CA: Hoover Institution Press, pp. 1-12.

Hanushek, E. A. (2005, October). *The alchemy of 'costing out' an adequate education.* Paper prepared for Conference on Adequacy Lawsuits, Harvard University.

Hanushek, E. A., Kain, J. F. & Rivkin, S. G. (2002). Inferring program effects for special populations: Does special education raise achievement for students with disabilities? *Review of Economics and Statistics, 84(4)*, 584-599.

Henderson , A. T. (1998). Parents are a school's best friends. *Phi Delta Kappan, 70,* 148-153.

Hedges, L. V., Laine, R. D. & Greenwald, R. (1994). Does money matter? A meta-analysis of studies of the effects of differential school inputs on student outcomes. *Educational Researcher, 23(3)*, 5-14.

Jepsen, C., & Rivkin, S. (2002). *Class size reduction, teacher quality, and academic achievement in California public elementary schools.* San Francisco, CA: Public Policy Institute of California.

Karoly, L. A. & Bigelow, J. H. (2005). *The economics of investing in universal preschool education in California.* RAND Research Report. Santa Monica, CA: RAND.

Koski, W. S. & Hillary A. W. (2004). What educational resources do students need to meet California's educational content standards? A textual analysis of California's educational content standards and their implications for basic educational conditions and resources. *Teachers College Record, 106*, 1907-1934.

Kenny, L., Denslow, D. & Goffman, I. (1975). Determination of teacher cost differentials among school districts in the state of Florida. In Tron, E. (Ed.) *Selected Papers in School Finance, 1975*. Washington, DC: U.S. Department of Health, Education, and Welfare.

Karoly, L., Greenwood, P., Everingham, S., Hoube, J., Kilburn, M. R., Rydell, C.P., Sanders, M. & Chiesa, J. (1998). *Investing in our children: What we know and don't know about the costs and benefits of early childhood interventions*. Santa Monica, CA: RAND Corporation.

Krueger, A.B. (1997). Experimental estimates of education production functions. *Quarterly Journal of Economics, 114(2),* 497-532.

Krueger, A.B. & Whitmore, D.M. (2001). The effect of attending a small class in the early grades on college test taking and middle school test results: evidence from project STAR. *The Economic Journal, 111,* 1–28.

Lee, V.E., Smith, J.B. & Croninger, R.G. (1997). How high school organization influences the equitable distribution of learning in mathematics and science. *Sociology of Education, 70*, 128-150.

Lee, V.E. and Smith, J. (1997). High school size: Which works best, and for whom? *Educational Evaluation and Policy Analysis, 19*, 205-228.

Miles, K.H., Odden, A., Archibald, S. & Fermanich, M. (2002). An analysis of professional development spending in four districts using a new cost framework. Working Paper, Madison: University of Wisconsin-Madison, Wisconsin Center for Educational Research, Consortium for Policy Research in Education.

Mishel, L. & Rothstein, R., (Eds.). (2002). *The class size debate*. Washington, DC: Economic Policy Institute.

Murphy, J., Beck, L., Crawford, M., Hodges, A. & McGaughy, C. (2001). *The productive high school: Creating personalized academic communities*. Thousand Oaks, CA: Corwin Press.

McKinley, S. K. (2005a). The journey to adequacy: The DeRolph saga. *Journal of Education Finance, 30 (3)*, 288-312.

McKinley, S. K. (2005b). Part II. The journey to adequacy: The DeRolph saga." *Journal of Education Finance, 30 (4)*, 321-381.

Neal, D. (1997). The effects of Catholic secondary schooling on educational achievement. *Journal of Labor Economics, 15,* 98-123.

Oakes, J., Blasi, B. & Rogers, J. (2003). Accountability for adequate and equitable opportunities to learn. UCLA. In Sirotnik, K. (Ed.), *Accountability run amok*, New York: Teachers College Press.

Odden, A., Fermanich, M. & Picus, L. (2003a). *The state-of-the-art approach to school finance adequacy in Kentucky*. North Hollywood, CA: Lawrence Picus and Associates. Prepared for Kentucky Department of Education.

Odden, A., Fermanich, M. & Picus, L. (2003b). *An evidence-based approach to school finance adequacy in arkansas*. North Hollywood, CA: Lawrence Picus and Associates. Final Report Prepared for the Arkansas Joint Committee on Educational Adequacy.

Raywid, M.A. (1997/1998). Synthesis of research: Small schools: A reform that works. *Educational Leadership, 55,* 34-39.

Ready, D., Lee, V. & Welner, K. (2004). Educational equity and school structure: School size, overcrowding, and schools-within-schools. *Teachers College Record, 106(10)*, 198-201.

Reschovsky, A. & Imazeki, J. (2001). Achieving educational adequacy through school finance reform. *Journal of Education Finance, 26(4)*, 373-396.

Rich, D. (1985). *The forgotten factor in school success: The family*. Washington, DC: Home and School Institute.

Rose, H., Sonstelie, J., Richardson, P. (2004). *School budgets and student achievement in California: The principal's perspective.* San Francisco, CA: Public Policy Institute of California.

Rothstein, R. (2004). *Class and schools: Using social, economic, and educational reform to close the black-white achievement gap.* New York, NY: Teachers College Press.

Sander, W. & Krautmann, A.C. (1995). Catholic schools, dropout rates and educational attainment. *Economic Inquiry, 33*, 217-233.

Schunk, D.H. & A.R. Hanson. (1985). Peer models: Influence on children's self-efficacy and achievement behaviors, *Journal of Educational Psychology, 77,* 313-322.

Shanahan, T. (1998). On the effectiveness and limitations of tutoring in reading. *Review of Research in Education, 23,* 217-234.

Slavin, R., Karwiet, N. & Wasik, B. (1994). *Preventing early school failure: Research, policy and practice*. Boston, MA: Allyn and Bacon.

Sonstellie, J. (2005). *A finance cost study for California*. Proposal submitted to The William and Flora Hewlett Foundation.

Taylor, L., Baker, B. & Vedlitz, A. (2005). *Measuring educational adequacy in public schools* (Working Paper Number 580). College Station,Texas: Texas A & M University, Bush School of Government and Public Service.

Timar, T. (2004). *Categorical school finance: Who Gains, who Loses?* (PACE Working Paper 04-2). Berkeley, CA: Policy Analysis for California Education.

Verstegen, D. A. (2004). Calculation of the cost of an adequate education in Kentucky: A professional judgment approach. *Education Policy Analysis Archives, 12(8)*, 1-36.

Wendling, W. (1979). *Cost-of-education indices for New York State school districts.* Denver, CO: Education Commission of the States.

Wenglinsky, H. (1998). *Does it compute? The relationship between educational technology and student achievement in mathematics.* Princeton, New Jersey: Educational Testing Service, Policy Information Center, Research Division.

Wenglinsky, H. (2000). *How teaching matters: bringing the classroom back into discussions of teacher quality*. Princeton, New Jersey: Educational Testing Service, Policy Information Center Report.

Wehlage, G.G. & Stone, C. R. (1996). School-based student support services: Community and bureaucracy. *Journal of Education for Students Placed at Risk, 1,* 299-317.

Wexler, E., Izu, J., Carlos, L., Fuller, B., Hayward, G. and Kirst, M. (1998). California's class size reduction: Implications for equity, practice, and implementation. Joint report by Policy Analysis for California Education (PACE) and WestEd.

CHAPTER 4

California's Accountability System

Catherine Bitter and Jennifer O'Day
American Institutes for Research (AIR)

ACCOUNTABILITY FOR STUDENT OUTCOMES HAS BECOME A CENTRAL FEATURE OF EDUCATIONAL POLICY IN CALIFORNIA. WITH ROOTS IN THE CALIFORNIA ASSESSMENT PROGRAM BEGUN IN THE 1970s AND CURRICULUM FRAMEWORKS DEVELOPED IN THE 1980s AND EARLY 1990s, CALIFORNIA'S CURRENT RESULTS-BASED SYSTEM GOT A BOOST FROM NATIONAL INFLUENCES AT THE END OF THE LAST CENTURY. Starting in 1994, accountability *based on outcomes* became the primary focus when the implementation of the Improving America's Schools Act (IASA),[1] coupled with dismal scores on the 1994 National Assessment of Educational Progress (NAEP), served as the impetus to implement a comprehensive and coherent accountability system in California.

Development of that system began with the establishment of standards in multiple subject areas and the Standardized Testing and Reporting system, or STAR. But it was the passage of the Public Schools Accountability Act (PSAA) of 1999 that put a fully developed, results-based system in place. PSAA established 1) a common index called the Academic Performance Index (API), by which to measure and rank the academic performance of schools throughout California; 2) the Immediate Intervention/ Underperforming Schools Program (II/USP), a program that provided assistance and funds, and threatened potential consequences for low-performing schools; and 3) the Governor's Performance Award (GPA) program to reward schools that made significant growth in student outcomes. Later the High Priority Schools Grant Program (HPSGP) was initiated under PSAA to target additional funds and assistance to the lowest performing schools in the state.

Implementation of the federal No Child Left Behind Act (NCLB) has further complicated California's accountability landscape. While the federal context has been present since the inception of accountability in California and has served as a strong force in forming the current-day system, only recently has the focus on reconciling the federal system with the state initiatives come to the forefront. More rigorous testing requirements and outcome targets within NCLB have resulted in overlapping accountability provisions in California that draw educators' attention in multiple directions.

This chapter reviews the evolution of accountability in California, and outlines several key issues confronting the state as it moves forward. As accountability in California encompasses a wide range of initiatives at the federal, state, and local levels, we will constrain our focus primarily to the evolution of PSAA and its current interaction with NCLB. In addition, we will focus exclusively on *school* and *system* accountability. California has also developed programs to address *individual* accountability, for both students and teachers. These include the California High School Exit Exam, required by high school students to graduate, as well as initiatives to ensure that students are being taught by a high quality teaching force. These aspects of accountability are addressed in other chapters of this book (6 and 7), and should be considered key parts of the full accountability landscape in California.

EVOLUTION OF RESULTS-BASED ACCOUNTABILITY IN CALIFORNIA

The current approach to results-based accountability in California has undergone several major phases over the past few decades, originating in the standards-based movement and evolving into an aligned system of standards, assessments, targets for growth, and consequences. In the 1980s and early 1990s, California played a leading role in developing a systemic and aligned approach to instructional improvement, with many observers identifying 1983 as the beginning of California's standards-based effort. In that year, which coincided with the national report, *A Nation at Risk*, the state legislature passed SB 813, reaffirming the need for curriculum frameworks to guide instruction, and setting standards for high school course enrollment. The establishment of the California Subject Matter Projects— a network of professional development institutes to support instruction aligned with the frameworks—followed shortly thereafter. The California Assessment Program (CAP) and later the California Learning Assessment System (CLAS) added aligned assessments as part of the system.

PHASE1: Establishing Standards, Assessments, and Public Reporting

The first major phase in the development of California's results-based accountability system established a foundation of standards, assessments, and public reporting of key data. The intention of the system was straightforward. Statewide content standards would set out expectations for what students should know and be able to do. Assessments aligned with these standards would allow educators to measure individual students' learning and to assess the extent to which schools were developing students' knowledge in key areas. Public reporting of state assessment results would then allow educators, parents, and the public to see progress made by individual schools and districts.

Standards

The move toward California's current academic standards accelerated in 1994, when several factors converged to create an environment conducive to standards-based reform. In particular, California's poor results on the 1994 National Assessment of Educational Progress (NAEP) convinced legislators that change was necessary, while the 1994 Elementary and Secondary Education Act reauthorization required that Title I students be taught according to the same state-adopted standards as other students, at least in reading and mathematics. These factors pushed state leaders in 1995 to build on and revise the content of the pre-existing curriculum frameworks in order to create statewide academic standards in the four core subject areas—English/language arts, mathematics, history/social science, and science. The final adoption of the current academic content standards in these subjects began in 1995 and was completed in the fall of 1998.

Assessments

Attempts to institute a statewide assessment system in California date as far back as the 1960s. Two critical precursors to the current system were the California Assessment Program (CAP) and the California Learning Assessment System (CLAS). The CAP, first administered in 1972, provided a "matrix sampled" test that allowed for the assessment of school performance, but not of individual student performance. Nearly two decades later, in 1991, the Superintendent

of Public Instruction introduced the CLAS, designed to align with the curriculum frameworks in place at that time. While this test measured performance of both schools and individual students, it faced opposition on many fronts and was eliminated in 1995.

With continued pressure to implement statewide aligned assessments to measure school and student outcomes, the state established the Standardized Testing and Reporting (STAR) Program in 1996. Because the state standards were still being developed, the State Board of Education selected the nationally-normed Stanford-9 (SAT-9) as the test that all public school students in grades 2 to 11 would take in the spring of 1998. The plan, however, was to develop and roll in additional assessments aligned with the new academic content standards. The transition to this standards-based assessment system was completed in 2002, with the administration of the California Standards Tests (CSTs) in English/language arts and mathematics.

Public Reporting

Public reporting of data on school characteristics and performance can serve as a strong motivator for educators and schools to improve student outcomes. In addition, given the large number of public dollars allocated to education, the public has a right to receive clear and valid information about their schools. In order to make useful and valid information publicly available to educators and communities, California has implemented provisions requiring the dissemination of school-level performance data to educators and the public. The passing of Proposition 98 in 1988, which ensured (according to several criteria) a minimum amount of funding for elementary and secondary schools, also required that schools compile an annual School Accountability Report Card (SARC) to provide information on various measures, including student achievement, dropout rates, class size, school safety, expenditures, curricular programs and instructional materials, and other items.

Federal reauthorization of ESEA in 1994 reaffirmed the need for the SARC by requiring that assessment results be reported and broken out by demographic groups. The STAR program enabled the state to obtain similar information on student achievement across all schools in California. Information from the STAR could thus be incorporated into the SARC. With such information available, the state could better identify struggling schools and districts that needed support or incentives to improve.[2]

PHASE 2: PSAA—Introducing Targets, Assistance, and Consequences

The system of statewide standards, STAR assessments, and public reporting served as the basis for introducing the Public Schools Accountability Act (PSAA) in 1999. The PSAA legislation moved California into the next phase of accountability by adding to this foundation:

- a set of targets based on standards and assessments,
- criteria to identify low-performing and high-performing schools, and
- a system of assistance and consequences.

This legislation moved California to a full results-based accountability system.

Targets Based on Standards and Assessments

One goal of PSAA and similar accountability systems elsewhere is to focus the attention of educators and the public on student achievement, with the assumption that this attention will lead to increased efforts to improve that achievement. To that end, PSAA instituted specific school-level targets for student performance based on the Academic Performance Index (API). For the first time, schools could learn how they ranked in comparison to all other schools in the state, and in comparison to demographically similar schools. These results were published publicly to raise awareness among communities about their schools' performance and to create incentives for schools to improve relative to others.

The API is a numeric index assigned to each school, ranging from 200 to 1000. Initially based solely on the results of the norm-referenced *SAT-9* portion of the STAR program, calculation of the API has now incorporated the California High School Exit Exam (CAHSEE) and the California Standards Tests in English language arts, mathematics, science, and history/social science, and has increased the weight assigned to these standards-based measures. Although the API ceiling is 1000, the Board of Education set an interim performance target of 800 for

all schools to achieve. This goal has served as the basis for determining individual school API targets on a yearly basis.[3]

The characteristics of the API targets represent certain choices that California policymakers made, and certain assumptions about the behavior that those choices might engender. Several types of performance are woven into the API targets[4]:

- Performance relative to a set standard—that is, a score of 800 on the API. The fact that the API is an index is itself important, as it incorporates multiple subjects, different measures, and an increased weighting over time of assessments aligned with the California content standards.
- Performance relative to past performance—that is, growth in API over time toward the absolute standard of 800. The amount of expected growth is based on the school's API score for the prior year.
- Performance relative to other schools. This is the norm-referenced aspect of the API. Schools are ranked against each other, and against schools with similar characteristics. These rankings are reported as deciles, which indicate the school's rank in terms of their overall relative performance and of their performance relative to similar schools.
- Performance disaggregated by "numerically significant subgroups." For a school to reach its target, it must also show "comparable improvement" for all numerically significant ethnic and economically disadvantaged subgroups.[5]

Another PSAA assumption is that the API growth targets will push schools not only to improve the average level of performance every year, but to do so for all their students, especially the lowest-performing students. The API formula rewards growth from the bottom upward more heavily than growth from the middle upward, creating an incentive for schools to provide the most help to pupils with the lowest scores.

Identification of Schools for Assistance and Consequences

PSAA introduced two programs— one for any school that *did* meet its targets (the High Performing/Improving Schools Program, also known as the Governor's Performance Award), and one for low-performing schools that did *not* meet their API growth targets (II/USP) —and established criteria for identifying eligible schools for each program.

Under the Governor's Performance Award program, schools qualified for a monetary award if they met their growth targets, showed comparable growth among all significant ethnic and economically disadvantaged subgroups, and satisfied testing participation rate requirements. However, because no funds were appropriated for awards after 2002, GPA identification did not occur after this time.

With respect to II/USP, two aspects of the identification criteria are important to note. First, in contrast to many state accountability systems, participation in California's program for low-performing schools was voluntary. By applying for II/USP, schools traded off the possibility of additional resources for the potential consequence of receiving sanctions down the road, should those resources not produce the desired improvement. Second, California chose to target a very broad range of schools as potentially underperforming. Schools that qualified for II/USP had scored in the bottom half of the state (Deciles 1-5) on the STAR tests and had failed to meet their growth targets in the qualifying year.[6] Schools could also be identified if even one subgroup failed to achieve the comparable growth target. The assumption/hope was that the potential for identification would encourage improvement efforts across this broad range of schools.

Assistance and Sanctions under II/USP

Once schools were identified, PSAA incorporated a system of assistance and consequences for those participating in II/USP. The legislation placed a strong emphasis on the role of improvement planning and on the value of assigning "External Evaluators" to assist these schools during the planning process. PSAA also threatened potential negative consequences for II/USP schools that did not meet their API growth targets.

Funding and Assistance. II/USP schools in the first year (planning year) received $50,000 to create and implement an Action Plan for school improvement. Subsequently, they received implementation funding from one of two sources: state funds appropriated for II/USP and funds from the federal

Comprehensive School Reform (CSR) program.[7] State-funded schools received $200 per pupil for the following two years to implement their Action Plan, while CSR-funded schools received the same level of funding for the following three years to implement a research-based school reform model.

Schools participating in II/USP were required to hire an "External Evaluator" during the planning year to assist in developing the Action Plan for school improvement. External Evaluators were individuals or organizations with experience in school reform, approved by the state to assist low-performing schools. The assumption underlying this requirement was that lower-performing schools often lack the capacity to identify problems and institute changes on their own. Therefore, they need external "eyes" and assistance to move forward.

Sanctions. Since II/USP was intended to be a voluntary program for schools, schools that participated in II/USP made an explicit trade-off of additional resources over three years for potential consequences at the end of this period should those resources not result in improved student performance. Schools that did not improve sufficiently over the course of the funding were subject to intervention by the Superintendent of Public Instruction, who would have the authority to take such actions as reassigning the principal or reorganizing or closing the school. The threat of sanctions was expected to increase motivation (effort) to improve student achievement. As will be discussed later, the large number of schools that failed to meet growth targets through II/USP led to the development of a new program to monitor and provide additional support to these schools.

PHASE 3: Fine Tuning of PSAA to Focus on the Lowest-Performing Schools—Implementation of HPSGP and School Assistance and Intervention Teams (SAIT)

Initial evaluation of the PSAA revealed that programs like II/USP and GPA had no significant or sustained impact on student achievement across participating schools when compared with similar schools that did not participate in the programs. More specifically, while some II/USP schools appeared to benefit and improve considerably, others did not, and some even lost ground. The net effect across all schools was negligible. One concern raised about II/USP was that it targeted a wide range of schools, some of whom were more demonstrably in need of resources and assistance than others, and that the level of funding was simply too low to produce results in the neediest schools. Responding to this and other concerns, the state modified the programs after the first few years in order to focus on a smaller number of the *lowest* performing schools and to better address those that failed to make substantial improvement during II/USP participation.

Narrowing of Eligibility Criteria

As stated above, the criteria for identification of II/USP schools were broad and thus resulted in a large number of schools identified as underperforming. This policy design has the advantage of capturing the attention of a broader range of schools (schools in the middle performance levels as well as low performers), but also has the disadvantage of potentially drawing in schools that have less need of the additional resources and assistance. Schools that had previously made all their targets but missed on one subgroup goal were as eligible to participate as schools that had failed to make any targets on multiple occasions.

In order to concentrate resources where they were most needed, the state-funded High Priority Schools Grant Program (HPSGP), established in 2001 as a part of PSAA, narrowed the identification of schools to those with API scores in the lowest decile (including II/USP Decile 1 schools). HPSGP provides funds for planning and three years of implementation to schools that apply and are selected for the program. Schools participating in HPSGP receive twice as much implementation funding per year ($400 per pupil) as those only participating in II/USP. Thus HPSGP focused a larger amount of funds towards a smaller number of high-need schools.[8]

Defining Consequences for Schools That Did Not Improve

Schools that volunteered to participate in II/USP made an explicit trade-off, choosing additional support and resources in exchange for subjecting themselves to potential sanctions should they not improve. Initially, schools in II/USP were scheduled to be subject to sanctions if they did not meet their growth targets for both II/USP implementation years. However, those schools that showed some positive growth in

either implementation year—but did not meet their growth targets—received funding for an additional implementation year.[9]

Schools that showed no growth in both implementation years became "state-monitored" schools and entered into a contract with a School Assistance and Intervention Team (SAIT).[10] SAITs are teams of educational consultants—often retired educators, and other individuals from private companies, county offices of education, and nonprofit organizations—who work with and monitor schools to improve student achievement.[11] A school remains state-monitored until it makes positive API growth for two consecutive years. The consequences for schools that do not show growth through the SAIT process have been unclear.

Both the HPSGP and SAIT programs focused additional funds and assistance to the lowest performing schools in the state: the Decile 1 schools and the II/USP schools that continued to fail. At this point it is still too early to tell definitively if these two programs are realizing better results than II/USP did. See Chapter 5 of this volume for preliminary findings on the effectiveness of HPSGP.

PHASE 4: State Accountability in Federal Context—"PSAA Meets NCLB"

The federal context has always played a key role in California's accountability program. Federal programs and legislation including IASA in 1994 and Goals 2000 have served as catalysts for the standards movement, the implementation of aligned assessments, and the public reporting of disaggregated test scores. They have influenced the evolution from California's original curriculum frameworks to the current-day content standards. However, with the implementation of NCLB, accompanied by a new layer of rigorous targets, identification criteria, assistance, and consequences for low-performing schools, the need to reconcile the federal and state systems has come to the forefront. Here we outline some of the key differences between the components of NCLB and California's PSAA.

Conflicting Targets

In place of the API, NCLB requires California and all other states to set targets for assessing whether schools and districts are making "adequate yearly progress" (AYP) toward the goal of all students achieving proficiency on state tests in reading and mathematics by 2014. Following federal guidelines, California's AYP criteria encompass several measures, including participation rates and "percent proficient" on state assessments (CST and CAHSEE), API performance for elementary and middle schools, and graduation rates for high schools. All schools, districts, and numerically significant subpopulations are expected to meet specific targets within each of these categories.

API and AYP targets differ in several important ways, with implications for school identification and the allocation of resources and consequences. First, while annual API targets are based on an expected *increase* in aggregate school performance as measured along an index scale, AYP targets set out an *absolute percentage* of students who must be at or above a specified level—proficiency on the CST—each year.[12] Second, as mentioned earlier, a school's API score increases more when the achievement levels of the lowest performing students increase, thus rewarding growth from the bottom upward more than from the middle upward. This structure can create an incentive for schools to raise the achievement of their lowest performing students. AYP targets, on the other hand, may encourage schools to focus on moving students from the "basic" to "proficient" categories, potentially neglecting the lowest performing students, in order to increase the percentage of students in or above this targeted band. Third, AYP also incorporates English Learners and special education populations into the list of subgroups and requires each subgroup to meet the same performance standards of all other students. The API initially did not. Finally, AYP includes graduation rates and the API as the NCLB-required "other academic indicators" of school performance for high schools and elementary/middle schools respectively.

One consequence of these differences in formula is that it is possible for a school to meet one set of targets without meeting the other, in any given year. For example, a school could increase test scores enough to meet their API growth targets schoolwide and among significant ethnic/racial and socioeconomic subgroups, but not meet the percent proficient target for their EL students and therefore fail to make AYP. Alternatively, a school could meet all percent proficient targets (as well as the additional targets such as participation rate) to make AYP, yet not *increase* their scores enough in one year to meet their API growth

targets. In 2004–05, nearly 1,561 schools met their API growth targets,[13] but did *not* meet all 2005 AYP criteria. Alternatively, 1,200 schools met all 2005 AYP criteria, but did not meet their API growth targets. One additional important difference between the two systems is that NCLB also holds districts accountable for meeting AYP targets. Districts must have 95% participation rates, as well as specified percentages of students meeting proficiency standards. The PSAA did not incorporate district-level targets.

Differing Consequences

Under NCLB, schools are subject to sanctions if they fail to make AYP for two consecutive years. At this point the school enters "Program Improvement" (PI). Sanction and intervention options gradually increase in severity each year that a school does not make AYP. These interventions include notification to parents of the school's PI status, giving them the option to change schools; provision of Supplemental Educational Services; possible replacement of school staff; and ultimately, school restructuring. A series of other instructional modifications and support enhancements are required along the way. A school does not exit PI status until making AYP for two consecutive years. As of the 2005–06 school year, California has 1,772 schools identified for Program Improvement

Under NCLB, local education agencies (e.g., districts) can also be identified for Program Improvement by failing to make districtwide AYP for two years in a row. PI districts are expected to create a plan for improvement and to implement that plan in the upcoming year. They face additional corrective actions in the third year.[14] Districts do not exit PI status until they have made AYP for two consecutive years. As of the 2005–06 school year, 154 local education agencies in California had been identified for Program Improvement.

EXPLAINING THE IMPACT OF PSAA: THEORY VERSUS PRACTICE

California has made substantial progress towards establishing a comprehensive results-based accountability system, beginning with the development of content standards and assessments and progressing to a system of targets, assistance, and consequences for low-performing schools. We now turn to the effect PSAA has had on student achievement and discuss its impact through the lens of the underlying theory of results-based accountability.

Impact on Student Achievement

Given the significant investment of public funds for PSAA, the state legislature required that the program's impact be evaluated regularly (O'Day and Bitter, 2003; Bitter et al., 2005). One noticeable finding of the first two evaluations is that achievement for all low-performing schools (both II/USP and similar schools that qualified for II/USP but did not participate) has increased sharply and significantly since the institution of the STAR testing program and the passage of PSAA.[15] The gains have been the greatest at the elementary level, more moderate for middle schools, and much lower for high schools. These overall increases in performance could be an indicator of increased attention to student achievement outcomes and low-performing schools, though it is not possible to link them directly with any aspects of the accountability system per se.

Despite this overall increase in state assessment scores, scores on the National Assessment of Educational Progress (NAEP) from 1992 to 2003 reveal less promising trends.[16] While these data also show that student achievement has increased over time, California has continued to perform well below the national average in both fourth and eighth grade mathematics and reading.[17] In addition, California's average NAEP scores are the lowest among the five most populous states in the U.S. (including Texas, New York, Florida, and Illinois). These trends are consistent among all racial and ethnic groups.

Linking these overall trends in achievement to the implementation of PSAA is difficult given the complex environment in which PSAA was introduced. One way to evaluate PSAA's effect more directly, however, is to examine the impact of its primary intervention programs, II/USP and HPSGP. At this point in time, analyses have not been completed to address the effect of HPSGP. However, analyses of the II/USP impact showed at most only modest and inconsistent differences in student outcomes between II/USP and relevant comparison schools (O'Day and Bitter, 2003; Bitter et al., 2005). In some cohorts and grade levels, II/USP schools experienced slightly larger achievement gains

in comparison to similar low-performing schools in the state during II/USP planning and/or implementation years. More often, however, there was no observed effect, and trends were inconsistent across cohorts and grade levels. Moreover, any modest gains observed during the period of program participation dissipated after program completion (Figure 1; Bitter et al., 2005).

Thus, while there were some statistically significant but small *positive* effects on school-level achievement gains during II/USP planning and implementation, there were significant but small *negative* effects on the growth of II/USP schools relative to their comparison schools in the years after the program ended.[18] For some groups of schools, this negative effect on achievement growth occurred even earlier, during the implementation years. In addition, when results were disaggregated by subgroups (English Learners, students in poverty, and special education students), they revealed no consistent positive or negative II/USP effects on achievement gaps among groups of students. *Overall, II/USP showed no advantage over similar schools that did not participate in the program.*

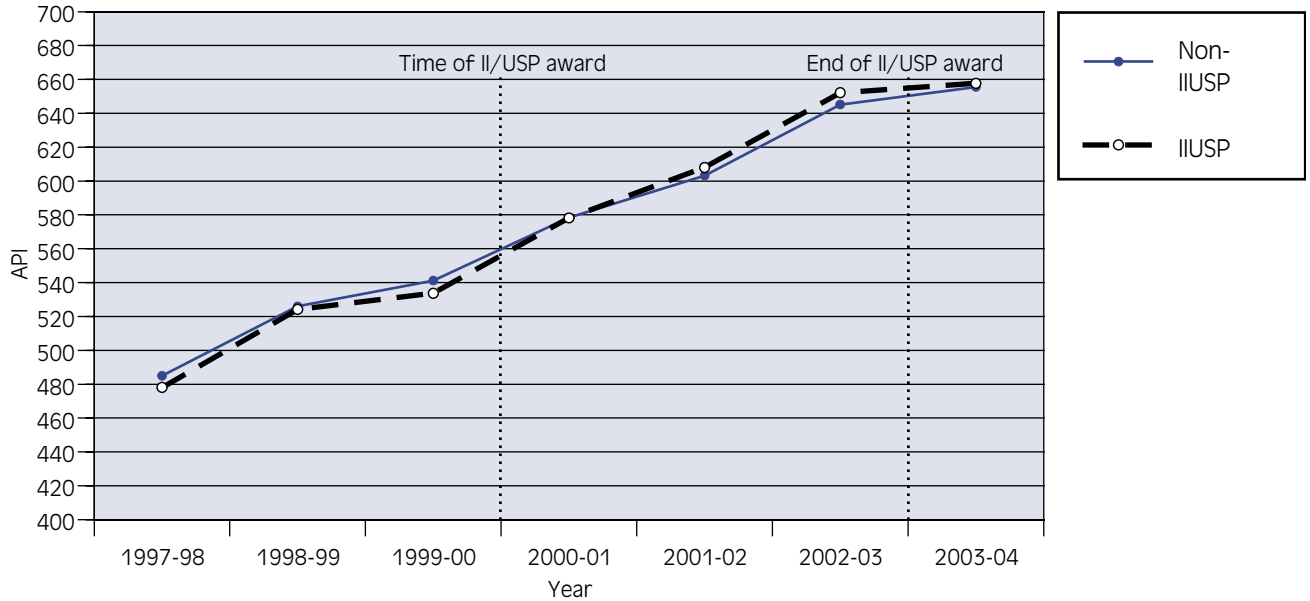
One main reason for the program's limited overall effect is that achievement trends among II/USP schools varied widely, such that some schools appeared to benefit substantially from program participation and funding while others gained little or even lost ground. We will explore additional potential reasons for this lack of effect in the discussion of issues that follows.

The Theory of Results-Based Accountability

The lack of observed benefits for programs like II/USP, coupled with the challenges that have arisen with the overlap of the state and federal systems, forces California now to reflect on and refine its accountability system. It is an opportune time to examine what is working within the system, what should be reconsidered, and what to do to resolve the differences between the federal and state programs. To that end, we move to an analysis of the impact of the system in light of its underlying assumptions.

While California's current accountability system has evolved in many ways since its inception, the basic components of the program have remained quite consistent over time. These include *standards*, setting

FIGURE 1: API Performance of II/USP Cohort 2 and Comparison Elementary Schools,[a] Controlling for School Characteristics[b]



a. "Cohort 2" consisted of 430 schools that began II/USP participation in 2000–01 The pool of comparison ("non-II/USP") schools were those that qualified for, but did not participate in, II/USP that year.
b. The analysis models controlled for a variety of school-level variables including student ethnicity, percentage of students eligible for free/reduced price lunch, percentage of English Learners, student mobility, average parent education, and percentage of teachers with full credential.
Source: Bitter et al. (2005)

out what students are expected to know and be able to do at key points in their schooling career; *targets* for assessing progress toward the standards; *data on student performance* (through assessments aligned with standards) made available to all stakeholders; *identification of schools (and districts)* for improvement; and *assistance and consequences* to stimulate growth. These components reflect a now nearly universal model of results-based accountability that identifies the school as the primary unit of accountability, holds schools accountable for producing specified results, and extends assistance and/or resources to schools that lack the capacity to do so. As part of a broader standards-based reform strategy, this accountability approach is intended to foster instructional improvement and student attainment of common, challenging standards.

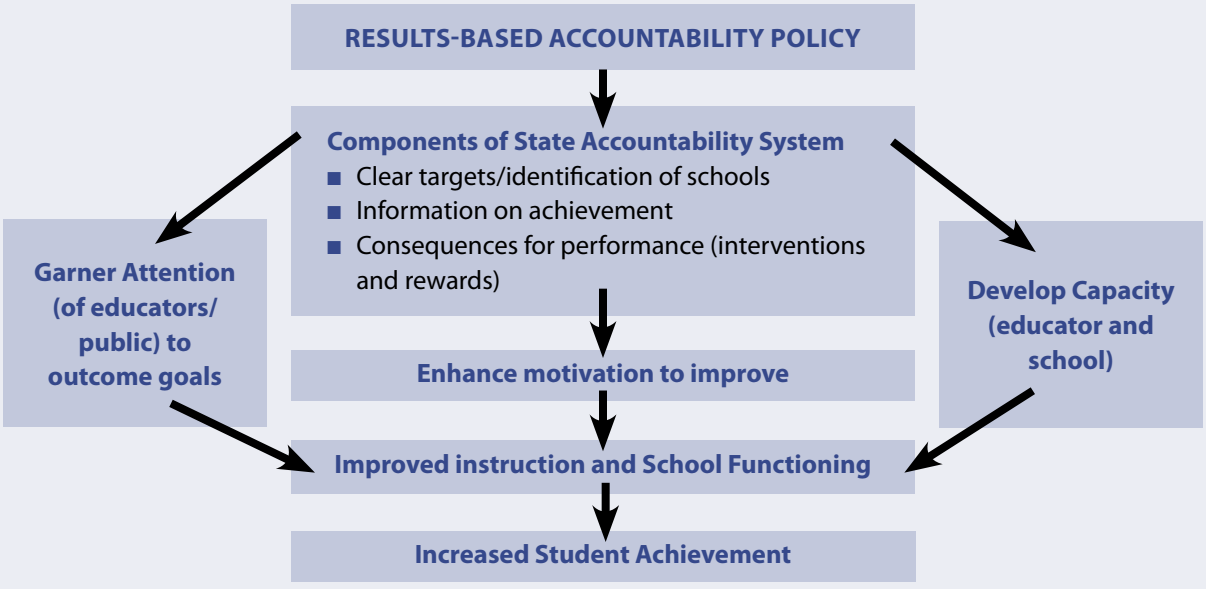
While the specific provisions of results-based accountability policies vary from jurisdiction to jurisdiction, they are based on a common set of assumptions (a generic "theory of action" Agyris and Schon, 1978) about the mechanisms and causal relationships through which accountability is supposed to work (O'Day, 2002; Finnigan and O'Day, 2003). In the case of PSAA, the primary components of the system are expected to:

- *Focus attention on student outcomes and low-performing schools.* The ability of the system to effectively focus attention depends on the use of clear and consistent targets and the availability of valid and accessible information on student performance and school processes contributing to that performance.
- *Motivate educators (and others) to expend the effort needed to improve.* Targets themselves serve as motivators, but accountability systems rely largely on incentives such as promises of rewards or the threat of sanctions tied to results.
- *Ensure that schools and educators have the capacity to implement strategies for improvement* through: Developing *knowledge and skills* of school personnel to interpret relevant information on learning and to select appropriate strategies in response. Allocating *resources* where they are most needed.

These assumptions are shown graphically in Figure 2.

As we have found little to no overall achievement effect of California's intervention programs for low-performing schools, it is important to consider how California's overall accountability program fulfills the assumptions outlined above. Below we discuss findings related to each of these assumptions. [19]

FIGURE 2: Simplified Accountability Theory of Action Model



Focusing Attention on Student Outcomes and Low-Performing Schools

PSAA, like other performance-based accountability systems, seeks to focus the attention of the public and the educational system on the improvement of student achievement and on low-performing schools. Clear standards and targets, coupled with useful information on student performance, enable educators to make informed decisions about strategies for improvement. In addition, the identification of schools most in need of improvement focuses the attention of states, districts, and educators on the specific needs of these schools.

The first II/USP evaluation (O'Day and Bitter, 2003) found that PSAA had indeed focused the attention of educators on student achievement outcomes, as measured by the API, and on the improvement of low-performing schools. School personnel were aware of their API scores, targets, and deciles. They knew that they must achieve both overall growth and sufficient subgroup growth to meet those targets each year. Data also suggested that the establishment of specific goals for each school may have contributed to the overall achievement growth in the state. In addition, the API seemed to be garnering more support as it incorporated greater and greater emphasis on the California Standards Tests, which practitioners viewed as better aligned with their instructional goals, and thus a better indicator of their students' progress towards state standards.

Perhaps equally important, the evaluation found that PSAA also focused attention on the lowest performing schools in the state. Not only was this attention evident at the state level, but it was also taken up by many districts, often leading to additional specific actions and programs within the district to support low-performing schools—in some cases whether or not those schools were participating in II/USP. The state focused attention even more on the lowest performing schools through the implementation of the HPSGP.

However, by 2005, the time of the second II/USP evaluation (Bitter et al., 2005) the environment had changed. The implementation of NCLB, as discussed earlier, had created an additional layer of achievement targets and expectations for educators in California. While both API and AYP measure school performance based on several measures of student achievement, the differences outlined earlier have made the targets for student achievement growth less clear and have somewhat diffused educators' attention as they attend to multiple targets.

Some practitioners participating in the second evaluation of II/USP (Bitter et al., 2005) did not see the additional layer of targets as a major distraction, saying that their plans to improve student achievement overall should meet the needs of both the state and federal programs. Others, however, at both the school and district levels, reported that having two separate accountability systems in place has confused and/or overwhelmed school and district staff. Keeping track of these two sets of targets and thinking strategically about how to meet them were considered difficult, particularly in light of the differences in student populations targeted through the two policies.

In addition, more and more schools are being identified for program improvement each year under NCLB. AYP incorporates many specific targets, and schools only need to miss one of them to fail to make AYP. As a result, an increasing pool of "underperforming" schools is demanding the attention of state policymakers and district administrators. The expanded pool has the potential to divert attention from schools that are truly the lowest performing and that need the most assistance. In addition, while there is considerable overlap, some schools are identified as low-performing under one system, but not in another. These differences send mixed signals to educators about the progress they have made in improving student outcomes. In addition, it is becoming more and more likely that higher performing schools will be identified as "low-performing" according to the federal standards.

These changes call into question the ability of the combined state and federal accountability systems to continue sending clear signals that will motivate educators who are working towards school improvement, and to maintain a focus on the *lowest* performing schools.

Enhancing Motivation of Educators

While increasing and focusing the attention of educators on student achievement is necessary to implement systemic improvement, educators must also be *motivated* to establish goals for improvement and work hard to improve instruction and student

outcomes. A key goal of the PSAA is to motivate educators to implement strategies for school improvement—most explicitly through the establishment of clear targets and the provision of extrinsic rewards and sanctions for meeting or not meeting those targets.

Realistic and Fair Targets

Targets can enhance the motivation of school practitioners by providing reasonable steps to reach their ultimate improvement goals. However, the research literature on motivation and employee performance suggests that targets will only be effective to the extent that individuals believe the targets are attainable (Locke and Latham, 1993). Alternatively, unreasonable targets can serve as a *dis*incentive if staff believe that no matter what they do, they will never reach the goals set out for them. The implication for school accountability is that to motivate educator performance, targets must be perceived as realistic and fair.

Data from the II/USP evaluations indicate that practitioners believed the growth targets associated with the API were generally reasonable, while federal AYP targets were often not. In particular, practitioners spoke of the difficulty they faced in meeting NCLB's absolute targets for certain groups of students, especially California's large English learner and special education populations (Bitter et al., 2005). Practitioners also noted that the many ways to fail AYP made it difficult to know whether increasing efforts on their part would actually result in success.

Incentives—Sanctions and Rewards. Rewards and sanctions for performance were also incorporated into PSAA as explicit incentives to motivate improvement. PSAA's theory of action anticipated that both the threat of sanctions (should a school fail to improve) and the promise of financial rewards (should a school meet its growth targets) would serve to increase schools' attention and motivation to improve student achievement. However, for promised consequences to motivate educator performance, they must be salient to school staff—i.e., staff must be aware of the incentives; they must value the outcomes; and they must believe the incentives will be implemented under the conditions outlined by the state.

Sanctions. Prior to the implementation of SAIT, the salience of the sanctions threatened by II/USP was weak (O'Day and Bitter, 2003). While some practitioners found the threat of sanctions to be disheartening to their improvement efforts, others were skeptical that the severe sanctions (e.g., state takeover) would actually be implemented. This skepticism was born out by subsequent events: when many schools did not meet their growth targets for both years of II/USP implementation, most were simply provided another year of additional funding while some (those that failed to meet their growth targets during both years of II/USP) were assigned a School Assistance and Intervention Team (SAIT).

While increasing and focusing the attention of educators on student achievement is necessary to implement systemic improvement, educators must also be motivated…

Now the question arises: what do school personnel believe will happen to schools that continue to fail within the SAIT program? The only data available to address this question comes from the second II/USP evaluation (Bitter et al, 2005) and suggests some cause for concern. Noting that the consequences for continued failure had not yet been spelled out, some principals reported that the resulting uncertainly made staff feel that the outcome was out of their control, thus creating a potential disincentive for them to put in extra effort to improve. By contrast, others simply dismissed the most severe sanctions as unlikely to ensue, regardless of performance.

With respect to the federal-state program interactions, sanctions associated with PSAA have continued to lose salience with the implementation of NCLB. Teachers and administrators generally considered the sanctions associated with not making AYP to be more severe than those associated with missing API growth targets, and therefore reported placing greater focus on avoiding sanctions associated with the federal system. Practitioners were aware of the potential to undergo corrective action or restructuring as a PI school, and were aware of the sanctions affecting many of them currently, including letters sent to parents allowing for school choice. It is important to note, however, that this situation may change as the number of schools identified for improvement rises and it becomes increasingly difficult to mete out the specified NCLB sanctions, especially the more severe ones. Should this

pattern develop, the salience of the NCLB sanctions may also dissipate over time, eroding any motivational benefit they might otherwise produce.

Rewards. As described earlier, the PSAA also originally provided a positive incentive for schools to improve, through the GPA program. In the case of this program, implemented in 2001 and 2002, the awareness and salience of awards—therefore their motivating power—appeared to be minimal. Though recipient schools were pleased to have received the rewards, respondents did not see them as a primary factor motivating continued growth. This weak incentive power may have stemmed from a distrust that schools would actually receive the rewards even if they reached their targets. The majority of school staff in the first II/USP evaluation study (O'Day and Bitter, 2003) did not expect rewards to ensue if their outcomes improved. The late disbursal of funds during the implementation of GPA, and the ultimate termination of the awards, is likely to perpetuate this distrust for years to come. At this point, no system of positive incentives exists in California's accountability system.

Developing Capacity for School Improvement

Focusing the attention of educators on student outcomes and then providing incentives for them to change these outcomes are two key components needed for the systemic improvement of schools. However, educators must also have the requisite knowledge and skills, and schools must have the resources, to develop and implement strategies for effective change. Thus, developing the *capacity* of educators and systems (including schools and districts) is vital to successful school improvement efforts. For one thing, people are more motivated to work harder and make changes if they have the capacity to do so. Perhaps more importantly, educators and systems require capacity to enable change to occur. Key forms of capacity include appropriate knowledge and skills of educators, adequate resources for schools and districts, and system and school infrastructure to support and sustain improvement.

Many outcome-based accountability policies now involve some form of professional development or other assistance to build the capacity of teachers and schools to implement effective strategies, improve instruction, and understand how to interpret and use data to inform instruction. PSAA included two components to develop educator and school capacity: external assistance and additional funds to implement school improvement strategies.[20] Shortcomings in both design and implementation of these components may have contributed to the policy's limited effects.

Improving Capacity of Low-Performing Schools.

External Evaluators. For II/USP, the External Evaluator hired during the planning year was expected to assist the school in developing a plan for improvement. Specifically, the PSAA legislation required the External Evaluators to provide technical assistance to the school site. Evaluators were to work with the school community team to identify weaknesses that contribute to below average performance, make recommendations for improvement, and begin to develop an Action Plan to improve academic performance at the school. Schools were then expected to follow through on this Action Plan during the subsequent implementation years.

This policy placed considerable emphasis and faith on the capacity-building efforts of the school improvement planning process. While the planning year was generally implemented as the legislation specifies, there was wide variation in both the quality and depth of the planning and in the quality and capacity of the External Evaluators and their organizations. Even where External Evaluators were strong and the planning process was considered successful, their influence on subsequent practice was often minimal.

One potential reason for the lack of relationship between planning and changes in either practice or outcomes is that the planning process was divorced from implementation in many respects. Specifically, the legislation did not include expectations for monitoring of implementation or continued support from the External Evaluator. Nor did it specify particular ways for schools to target instruction in their improvement strategies. For example, capacity-building strategies and instructional coherence were factors that were seen to contribute to schools' growth during II/USP. However, schools were differentially able to build capacity and instructional coherence. We expect HPSGP may experience a similar disconnect as well, since this policy did not further specify the link between the planning year and implementation years.

In contrast, the SAIT process lays out specific requirements for teacher and principal training[21] and

adds guidelines to ensure that teachers use data to inform instruction. However, SAIT still relies on the knowledge and skills of the external team hired by the district and school. These teams face a huge challenge in attempting to turn around underperforming schools. Their efforts are, at a minimum, based on an initial audit and three monitoring visits throughout the year. Given the magnitude of the task facing school personnel, this level of intervention and assistance is relatively small. While many SAITs provided technical assistance above and beyond that specified in the guidelines, others were only able to provide what was required. In addition, there is still no system in place to assess individual SAIT's effectiveness in improving these low-performing schools. Thus, the ability of these teams to provide meaningful capacity-building assistance and support still remains to be seen.

Funds for School Improvement. The development of improvement strategies can only go so far without the requisite resources to implement the strategies. Given the inequities in the resources children bring into schools, most educational systems attempt to incorporate some degree of resource targeting to high-need, low-performing schools. The PSAA has attempted to do this in several ways by allocating additional funds to low-performing schools through the II/USP and HPSG programs, but again, problems in design and implementation may have undermined impact.

The first II/USP evaluation (O'Day and Bitter, 2003) found that schools generally spent their funds on goods and services directly related to instruction, including support providers, professional development and release time, instructional materials, and instructional personnel. However, schools often received the funds so late in the school year that they were unable to use them in the ways intended. Planning in II/USP schools was hampered by late arrival of funds to pay the External Evaluators, coupled with the tight deadlines for carrying out the required activities before the plan had to be submitted to the state. Similar delays in subsequent years meant that schools were often unable to implement all of the activities laid out in their Action Plans, especially if those activities involved professional development or purchases to occur before the start of the fall semester. In some cases, districts advanced money to schools in anticipation of the forthcoming state funds, but when the number of affected schools in the district was high, this accommodation was not always possible.

A further concern that emerged in the second II/USP evaluation was the ability of schools to maintain their improvement strategies when funding ended. Several schools discussed ways in which they would either have to eliminate or reduce programs implemented during II/USP or staff hired during II/USP upon exiting the program. In addition, the achievement analyses indicated a drop-off in achievement gains among II/USP schools relative to similar non-II/USP schools after the funding ended. While this drop-off could be due to a variety of factors (e.g., the increased pressure placed on non-II/USP schools from the federal accountability provisions), one possible explanation is that the level of resources *without* II/USP funds is insufficient to maintain the growth they were making. The recent budget crisis in California has only exacerbated these resource constraints.

While HPSGP provides even more concentrated funding to the schools most in need, this program will also come to an end for participating schools. With limited ability to carry over funds beyond the four years of participation, schools will face an even greater differential between funding levels during and after program participation.

Improving the Capacity of Systems—the Missing Link

The drop in relative growth of II/USP schools in relation to comparison schools after program participation, coupled with reports from schools that they were unable to maintain strategies after the additional funding ended, raises questions about the long-term infrastructure supporting these schools. Although PSAA included components to address *school*-level capacity, it did not include provisions to address *system*-level capacity, such as the adequacy of the base resources available to *all* California schools or the capacity of districts to support their schools during and beyond participation in programs like II/USP.

Adequate Resource Base. The improvement of low-performing schools has long been a difficult and intractable process. In California, a contributing factor may be the overall level of resources available to all schools. Accounting for variations in the cost of education, California schools are among the most poorly funded in the nation. In 1999–2000, spending

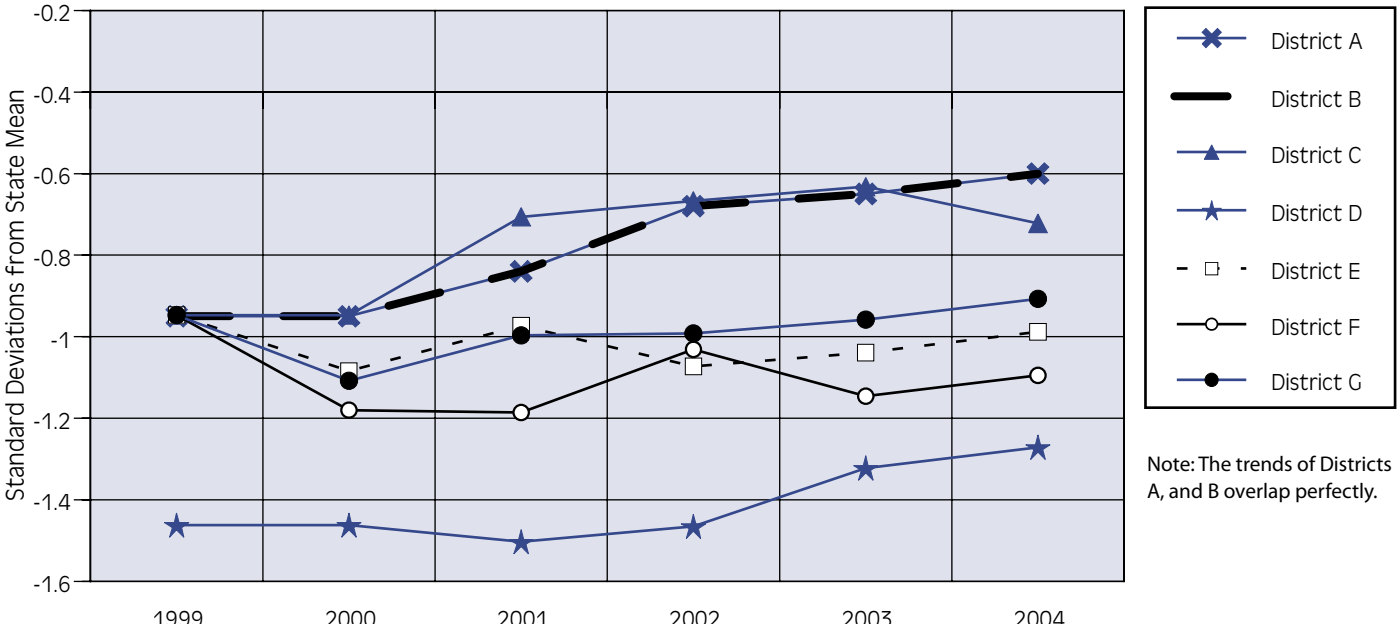
per pupil in California was more than $600 below the national average (Carroll et al., 2005). In addition, when adjusted for purchasing power, teacher salaries in California lag behind the other four most populous states (Carroll et al., 2005).[22] Pupil-teacher ratios reflect these limited resources: despite the class-size reduction proposition passed in July 1996, California continued to have the second highest pupil-teacher ratio in the U.S. as of 1999–2000 (Carroll et al., 2005).

In addition, the schools that are struggling the most tend to have the most challenging student populations and the fewest resources to address them. The correlation between school poverty and II/USP participation is clear, with an average school poverty rate in California of 50%, compared to an 80% poverty rate for II/USP schools. In addition, according to a recent study by the Center for the Future of Teaching and Learning, 21% of California teachers in the lowest achieving schools were considered underprepared and/or novice (in their first or second year of teaching) in 2004–05. In high-achieving schools, only 11% of teachers were given this designation. Similar differences were seen between schools serving high minority populations compared to schools with low proportions of minority students (Esch et al., 2005).

District Influence on Capacity. An additional key aspect of capacity is the infrastructure to support and sustain improvement efforts. Both of the II/USP evaluations found a substantial district influence in all aspects of II/USP implementation and impact. In particular, school and student outcome data indicated that achievement trends differ significantly and systematically across the large urban districts, and these differences overshadowed any effects of II/USP. For example, Figure 3 depicts the estimated reading scores among lower decile schools (Deciles 1-3) in the seven largest districts in California from 1999 through 2004. Large differences in growth patterns among districts can be seen.

Qualitative data from the II/USP studies indicated that the districts' influence on outcomes varied by the extent and nature of district actions and strategies. One area in which district actions were key was capacity building. For example, some districts played

FIGURE 3: Estimated Reading Scores (SAT-9, CAT/6)[a] in Decile 1-3[b] Elementary Schools (Grades 2-5) from California's Seven Largest Districts,[c] Controlling for Differences in School Demographics[d]



Note: The trends of Districts A, and B overlap perfectly.

a. Using SAT-9 scores from 1999 through 2002 and CAT/6 scores for 2003-2004. Scale scores are standardized against the state mean scale score in each year.
b. Based on API state rank of 1999 and 2000.
c. Including Fresno, Los Angeles, Long Beach, Oakland, Sacramento, San Diego, and San Francisco
d. The analysis models control for differences among districts in school-level demographics (student ethnicity, percentage of students eligible for free/reduced price lunch, percentage of English Learners).
Source: CDE (star.cde.ca.gov), Official School-level Data

an active role in selecting External Evaluators, in some cases narrowing the approved list of providers, and in other cases actually making the selection for each (or all) schools. In addition, some districts set up or required supports during the implementation of II/USP, including external assistance, professional development, and monitoring (O'Day and Bitter, 2003; Bitter et al., 2005).

Beyond direct II/USP participation, district central offices also affected the capacity of all low-performing schools in their jurisdiction through instructionally related policies. For example, some districts implemented a common specified approach to literacy instruction, frequent monitoring of student progress, or aligned professional development. Others implemented mandated curricular packages. And others targeted additional resources (both monetary and personnel) towards their lower-performing schools.

Where the district took a strong role in curriculum and instruction, it tended to overpower or direct any independent effects of II/USP. Some districts, however, lack either the capacity or will to provide such leadership or support. This variation can stem from the inequitable distribution of funds across districts, as well the fact that some districts have higher needs than others (e.g., high concentrations of English Learners or students in poverty). The PSAA did not address this variation in district capacity, nor the role that districts can play in schools' strategies for improvement.

CALIFORNIA'S ACCOUNTABILITY SYSTEM MOVING FORWARD

California's accountability system has succeeded in increasing the attention of educators to student outcomes and low-performing schools. In addition, it has established incentives and supports that aim to motivate educators and provide additional capacity to schools undertaking improvement efforts. However, findings above point to important limitations of the system. The limited effects of the intervention programs associated with this system and the implementation of the federal NCLB now raise questions about what next steps California should take to make the system more effective and coherent.

Based on the evidence to-date, we have identified three major goals for strengthening California's education accountability system:

- ***Align the federal and state accountability systems:*** NCLB has instituted an additional layer of targets and criteria for interventions. Resolving differences between the two systems will be a key challenge in upcoming years.
- ***Allocate sufficient additional resources and assistance for low-performing districts and schools, and take appropriate actions when improvement is not forthcoming:*** California has already established a system of interventions for low-performing schools that provides resources, assistance, and consequences. However, the limited effect found from these programs raises questions about how to improve the design and implementation of this system.
- ***Build a long-term infrastructure to support the continuous improvement of schools throughout the state.*** Building a strong infrastructure will enable the continuous improvement of all schools across the state.

GOAL 1: Align the federal and state accountability systems.

The introduction of PSAA, including the API, succeeded in focusing the attention of educators and the public on student achievement and low-performing schools. However, overlapping targets and expectations more recently introduced through the federal accountability system have diffused this attention and increased confusion around targets and expected consequences. Schools are now being identified for interventions based on two sets of criteria that sometimes, but not always, overlap.

Consistent and Fair Targets. In order to send clear and consistent signals and maintain the focus on the lowest-performing schools, we recommend that state policymakers focus on harmonizing the accountability systems by better aligning the targets associated with the two systems. California should have a coherent system of standards, targets, and goals that build on the most effective aspects of the two policies.

■ **Recommendation 1a: To send consistent signals to schools, the state should continue to press the federal government to negotiate a unified set of targets that incorporates the best of both the PSAA and NCLB. The unified set of targets should be realistic and fair.**
The 2005 II/USP evaluation (Bitter et al, 2005) suggested that a *growth* model for accountability is important. Practitioners in II/USP schools generally reported that the PSAA's focus on aggregate growth in school performance was a more realistic goal for improving low-performing schools than AYP's focus on getting more students over a particular proficiency bar. The API growth calculations place more weight on the growth of the lowest-performing students, many of whom are concentrated in low-performing schools. In addition, the API targets recognize the growth and progress of low-performing schools that may still be far from meeting the proficiency standards associated with AYP.

On the other hand, the AYP includes alternative measures, such as graduation rates, that are important indicators of school and student progress. In addition, AYP sets the same high expectations for all subgroups, such as English Learners. In establishing one set of clear targets for schools within a unified accountability system, the state may consider including some of these same standards and indicators in API. However, the targets must be set appropriately to ensure that they are realistic and fair.

We should note that neither set of targets incorporates measures of individual student growth. The lack of a longitudinally-linked data system in California prohibits the tracking of this growth over time, and has also limited the state's ability to take advantage of the federal government's pilot program for growth models. We address the need for such a system below under Goal 3.

Common Criteria for Identification of Schools and Districts. In order to further align the state and federal systems, the state should consider methods to better align the criteria used to identify schools for intervention.

■ **Recommendation 1b: The identification of schools for interventions through PSAA and NCLB should be aligned.**
At this point, varying numbers of schools have been identified as "low-performing" within the multiple systems of support and accountability. For example, 1290 schools were identified for II/USP, 290 of which were *also* identified for participation in HPSGP. An additional 368 were identified for HPSGP alone, or HPSGP and the federal CSR program. Overlapping with these schools, 1772 are in Program Improvement (identified through NCLB). Finally, 163 are now being state-monitored in the SAIT program.[23] The state could further focus on having a more consistent pool of schools identified for sanctions under both federal and state programs. In determining the criteria for identification, the capacity of the state to intervene in schools should be considered.

Aligned System of Support and Consequences. Both the federal and state accountability programs provide systems of support and interventions for schools that do not improve. To make the consequences of poor performance clear to all educators, the sanctions for schools and districts within the federal and state programs could be better aligned.

■ **Recommendation 1c: The nature of support and consequences for failing schools should be aligned across PSAA and NCLB.**

The state has made progress towards this alignment through the development of the nine Essential Program Components (EPCs) that are currently being used to guide improvement strategies in SAIT schools and PI schools. Additional measures to maintain this alignment will send clear signals to schools and districts about assistance and consequences they will face if improvement is not forthcoming.

GOAL 2: Allocate sufficient additional resources and assistance for low-performing districts and schools, and take appropriate actions when improvement is not forthcoming.

The state will continue to have low-performing schools and schools with high-need student populations. To assist these schools, we recommend that the state implement a triaged system of support and intervention that focuses intense efforts and resources on the lowest-performing schools. Such a system should include policies for the identification of schools, supports, and consequences that are realistic and fair and that address gaps in achievement among groups of students. The programs must provide the necessary resources for change, and effective assistance to develop coherent capacity building strategies for improvement. The II/USP and HPSGP programs have taken initial steps towards such a system, but have not yet proven to have the desired effects. The recommendations below address next steps for these interventions.

Targeting of Resources. First, the state must consider how best to allocate additional funds most efficiently and effectively to enable school improvement in its low-performing schools. The current budget crisis has limited the funding available for these allocations, and the pool of schools considered "low-performing" continues to grow. The state must therefore carefully consider which schools should be targeted for additional resources, and allocate sufficient funds to those schools to enable improvement.

■ **Recommendation 2a: The state should target additional resources to the schools most in need, and should appropriate sufficient additional funds for these schools to develop and maintain effective improvement strategies.**

California has made considerable progress towards this goal over the past few years. While II/USP targeted a wide range of schools, HPSGP concentrated its funds in approximately half the number of schools, all of them among the state's lowest performers. In addition, HPSGP doubled the program's supplemental expenditure from $200 per pupil (under II/USP) to $400. This concentrated attention and support runs counter to the current requirements for NCLB. As more and more schools are identified for Program Improvement under NCLB, the state must consider ways to maintain the focus on the lowest-performing schools developed through HPSGP.

In addition, the state should examine closely the time frame needed to make effective change in schools, and maintain funding across this time frame. A sudden drop in funding has the potential to undermine effective strategies initiated with assistance funds. Providing schools with greater flexibility to carry over funds and additional opportunities to apply for continued funding if they have made progress could ensure that schools use their money effectively over time and ease the transition out of the supplemental assistance program.

Finally, the state and districts should pay particular attention to the development and deployment of instructionally strong leaders and teachers in low-performing schools. Incentives for experienced and high quality teachers and principals to work in these schools could help build and sustain essential capacity for improvement over the long haul.

Provision of Skilled External Support. PSAA provided a system of support for low-performing schools through the provision of an External Evaluator to assist schools in their planning efforts. However, the knowledge and skills of the External Evaluators, the intensity of their support, and the strategies developed during the planning year varied considerably among schools.

■ **Recommendation 2b: The state should take steps to ensure that external assistance providers have the capacity to effectively assist low-performing schools.** Ongoing monitoring of external assistance providers, including SAIT providers, will help to ensure that the lowest-performing schools receive strong support to enable them to improve. The state should examine how best to assess which providers have been successful and under what conditions, and should select external assistance providers for continued work based on these assessments. The providers should be held accountable for providing ongoing support, guidance, and monitoring to schools during and beyond the planning year.

The state should also develop methods to *build the capacity* of assistance providers in the state to provide high quality and effective support. In addition to monitoring, external assistance providers need to have the skills to provide guidance and assistance in developing internal capacity at the schools and a coherent instructional program. Improvement efforts should incorporate capacity-building strategies such as instructional collaboration and professional development, particularly around the use of data to inform instruction. To this end, assistance from external agents should be focused in this direction. Support around these strategies should be intensive and should address the needs of the unique student populations at each school, in particular English Learner and special education populations.

Consequences for Continued Low Performance. Inevitably, some schools, even with additional and appropriate resources and support, will fail to improve. The state must consider how best to address persistent lack of growth.

■ **Recommendation 2c: The state should develop a plan to address schools that continue to fail. The consequences put in place should be piloted for effectiveness, and should then be implemented consistently over time.** California's system of consequences for persistent failure has lacked consistency. Because the criteria and terms of sanctions have changed over time, educators have been unclear about what consequences they will face for success or failure. Now, with the NCLB consequences rising to the forefront, schools are facing possible sanctions from multiple sources. This situation is likely to increase the confusion around sanctions and thus to decrease their motivating quality. To avoid this outcome, the state needs to consider how to implement a unified system of consequences for schools that continue to fail, one that is clear and consistent over time. The consequences need to be realistic in scope—i.e., possible to implement given available funds and resources for support—and fair. The state should consider strategies that other jurisdictions have tried or discussed, for example contracting out school governance or reopening a school in a different configuration or with a different

governance structure (e.g., a charter school). Specified sanctions should be based on evidence demonstrating their effectiveness in other locales or states.

GOAL 3: Build a long-term infrastructure to support the continuous improvement of schools throughout the state.

The recommendations above address ways to align and enhance the state's accountability system, including additional resources and support to low-performing schools. However, no system will result in meaningful increases in student learning and achievement without adequate and equitable resources and infrastructure to back it up. The state needs to develop a structure that will continue to provide adequate resources and supports to *all* schools in the state. This structure must account for the varied needs and circumstances of schools across California.

Adequate Base Level of Resources. California's base level of resources needs to be examined, particularly in high-poverty low-performing schools. If the state's most challenged schools are starting at a disadvantaged level of resources, it is unrealistic to expect short-term monetary infusions like II/USP to have a sustained impact.

■ **Recommendation 3a: The state should define and allocate the base resources needed to produce and sustain academic success across all schools, taking into account the unique needs of each school and district's student population.**

Given that schools reported being unable to sustain key strategies implemented through II/USP, sufficient resources to sustain improvement efforts must be an important component of any program that provides focused resources for change. The state should examine carefully the resources necessary to address the needs of the state's schools, and ensure that these resources are allocated effectively across schools. The level of resources should take into account the individual needs of students in each school, providing appropriate funding to support effective strategies for English Learners and special education students. To this end, several foundations have funded a set of school finance studies in California (see Chapter 3) that will systematically examine the funding needed for schools and districts, based on the state's goals for student achievement and on student needs. These studies should provide valuable information to inform the resource standards for the state.

Since the district is a key intermediary between state-level policy and school-level implementation, the state must also ensure that *districts* have adequate resources to provide the necessary assistance and support to their schools and that they allocate them to low-performing schools as needed.

District Capacity and Accountability. Given the substantial impact that districts can have on building the capacity of their low-performing schools, districts are an important vehicle, not only for ensuring effective implementation of programs such as II/USP, but also for facilitating growth among all low-performing schools in their jurisdiction. Recognizing this key role, state policymakers should ensure that districts have the capacity to assist and support their schools undertaking improvement efforts. Districts should then be held accountable for creating and maintaining conditions that ensure success within programs like II/USP and for providing long-term and sustained support and monitoring to maintain progress made.

■ **Recommendation 3b: The state should build the capacity of low-performing districts and of districts with high numbers of low-performing schools.**

Districts should then be held accountable for the performance of their students and schools.
Districts should also be encouraged to play a key role in this effort by ensuring that funds are allocated in a way that supports their lowest-performing schools. One district in the 2005 II/USP Evaluation, for example, allocates dollars to schools on a per pupil basis, rather than in full-time equivalents (FTEs). Under such a plan, schools with less experienced and therefore less expensive staff have additional resources available to spend on instructional resources or additional staff. Such student-based funding systems within districts generally feature weights, ensuring additional district resources for schools enrolling high percentages of students with special needs, such as students in poverty, English Learners, and special education students. This is just one example of ways in which districts can allocate money to better align resources with the needs of their schools, based on the characteristics of the students they enroll.

Recognition of Success. Focusing only on the identification of failing schools and on punitive consequences for these schools has the potential to discourage educators. While such negative incentives may be unavoidable in a comprehensive accountability system, the fact that there is currently **no** program in place to recognize schools that have greatly improved may hinder the motivation fostered through PSAA. In fact, schools that improve in programs like II/USP lose supplemental resources when they succeed in meeting their growth targets. Such "punishment" for doing well can serve as a disincentive.

■ **Recommendation 3c: The state should implement positive incentives that recognize and reward the improvement of low-performing schools and motivate educators to continue improvement efforts.**

To ensure proper acknowledgment of success, high poverty schools that are beating the odds should receive public acknowledgement. This acknowledgment can serve both as a continuing motivator for growth, as well as a means to identify models for other high poverty schools that are not succeeding across the state. Successful, high poverty schools can provide concrete examples of what can be done to successfully improve student achievement.

Given the state's fiscal constraints and the lack of evidence that monetary rewards provide a meaningful incentive, however, the state should think creatively about other forms of incentives for educators. For example, the state could consider incentives for highly qualified and experienced teachers to teach in high-need schools, incentives such as reduced regulatory requirements for districts to support schools' improvement and additional technical assistance to schools undergoing improvement initiatives. Individual educators can be motivated by a variety of incentives including good working conditions, opportunities for growth through professional development, and opportunities for meaningful collaboration with colleagues.

Comprehensive Longitudinal Data System. The state has created a number of systems to provide useful and accurate information on student and school level academic performance for educators and the public. Educators can now examine aggregate progress of schools over time and can use yearly disaggregated assessment data to plan instruction and strategies for school improvement. In addition, parents can access information on school performance, demographics, and other indicators. However, several vital forms of data are still lacking, including a longitudinal dataset that provides information on individual students' progress over time. Also lacking are frequent data on student

achievement that teachers and principals can use to inform instruction and school-level strategies for improvement.

■ **Recommendation 3d: The state should develop and fund the implementation of a comprehensive, longitudinal, accessible data system that will make possible the analysis of school, student, and district level progress over time in more accurate and useful ways.**
In 2002, Senate Bill 1453 authorized the establishment of such a data system. Since then, however, internal disagreements among state-level departments have hindered progress on the system's development.[24] More recently, the allocation set aside by the State Legislature to support districts in collecting and entering the initial requisite data for this system was suddenly cut from the 2006 state budget. For this reason, we strongly urge the various branches of the state government—the Legislature, the Governor's office, Finance, and the CDE—to work to resolve whatever issues continue to hold up this effort. We also encourage the state to provide the funding necessary for districts to implement this system, at least during the initial start-up period when new data collections and systems must be established at the local level. Such a database and information system is a statewide concern; its quality should not be dependent on the uneven capacity and will at the local level.

From the state perspective, a comprehensive student-level dataset would enable more effective evaluation of educational programs and policies over time. School progress could be assessed based on the growth of individual students across years, rather than on improvement from one cohort of students to another. In addition, a system that also tracks teacher assignments would enable further evaluation of programs that could impact teacher mobility. These data would allow for finer-grained analyses, which would enhance research on the effectiveness of programs and policies. Finally, the presence of such a system would enable California to conduct further negotiations with the federal government to establish a growth model for AYP in California.

In addition, of course, such a system would have direct applicability for instructional improvement at the local level. It would allow educators to track individual students' progress over time, a particularly important goal given the high level of student mobility in many California districts. A longitudinal system would enable educators to examine past performance of students who attended other schools or districts in California, and then plan an instructional program appropriate to the students' needs.

To ensure that such a system is used effectively and to its potential, the state must consider ways to make the data accessible to educators and researchers while maintaining student privacy. Educators should have access to individual students' records of performance and teacher assignments for students in their jurisdiction in order to plan instructional programs. In addition, educators should be trained how to access and use these data effectively

Use of Benchmark Data. Beyond a central longitudinal system of data, the state should also consider ways to foster the use of data to directly inform instruction. In both a recent EdSource report (Williams et al., 2005) and the second II/USP evaluation, systematic analysis and use of data to inform instruction was identified as a key factor for growth in student outcomes and higher achievement in high poverty schools.

■ **Recommendation 3e: The state should support training for principals and teachers on the use of benchmark and**

formative assessment data as a feedback mechanism for informing instruction and identifying students for extra support. Respondents in the second II/USP evaluation emphasized the importance of frequent (e.g., monthly or every 6 weeks) benchmark assessments tied to the school's curriculum and to the state standards. Related ongoing communication and collaboration around data among grade-level and cross-grade-level colleagues were vital to this process. Thus, we recommend the state incorporate such a focus into its professional development and leadership training programs to better build the capacity of teachers and principals to regularly and effectively use data.

Successful systems are already in place in some districts and schools that are realizing considerable gains in student achievement. For this reason, the state role may include further identifying such systems and encouraging their continued development and dissemination. Those systems already in place were typically based on assessments associated with districtwide curricula tied to the state standards, and were supported by software packages that enabled the analysis and dissemination of assessment results in a user-friendly format.

CONCLUSION

The state has made significant strides towards creating a coherent, results-based accountability system in California. An aligned set of standards, assessments, curricula, and targets are in place, and the PSAA allocates resources and sets consequences based on this aligned system. Nonetheless, the state must continue to examine the ability of this system to garner the attention of educators and the public towards student achievement, to motivate educators to implement new strategies for instructional improvement, and to build the capacity of educators and schools.

The current context in California, particularly the implementation of NCLB and fluctuating fiscal constraints, has placed additional stresses on the current system. NCLB has diffused the clear signals in place when PSAA was first implemented, and past fiscal crises have strained the base resources available to schools undertaking improvement efforts. In the coming years, the state needs to think creatively about how best to accommodate these stresses in order to reestablish a coherent and effective system. It needs to consider ways to align the state and federal systems so as to establish one unified and coherent accountability program of targets, assistance, and consequences. In doing so, the state must determine how best to build on the most effective aspects of the federal and state systems; to target resources effectively and efficiently; and to create incentives that are realistic and fair. Recognizing and supporting the role of districts in these efforts will be key to their success.

ENDNOTES

1 The Improving America's Schools Act (IASA) was the name given to the 1994 reauthorization of the Elementary and Secondary Education Act (ESEA) of 1965. When Congress reauthorized ESEA again in 2001 they called the revised legislation by a new name, the No Child Left Behind Act (NCLB). California's standards and results-based accountability have been influenced by both reauthorizations of the ESEA.

2 Later, NCLB further specified the content of the SARC, requiring information such as AYP results and the extent to which "highly qualified" teachers are teaching core subject areas.

3 For a school with an API score below 800, for example, the annual performance target is to grow by 5% of the difference between its actual API score and 800. For a school with an API score of 800 or above, the target is to maintain a score of 800 or above, hopefully increasing over time as well.

4 It is important to note that these policy choices, individually and collectively, result in markedly different criteria from those that NCLB would require of all state accountability programs two years later. We address the conflicts between PSAA and NCLB programs in later sections of this chapter.

5 An alternative accountability system has been established to hold accountable schools with fewer than 100 pupils, special education schools, and alternative schools.

6 When II/USP was first implemented in the summer of 1999 (prior to the availability of API growth information), the CDE invited schools scoring in the bottom

half of the state's schools on the SAT-9 for two consecutive years (1998 and 1999) to submit an application for II/USP. Schools entered II/USP in three cohorts. The first cohort of 430 schools entered II/USP in 1999; Cohort 2 included an additional 430 schools in the fall of 2000; and 430 were included as Cohort 3 in the fall of 2001. II/USP schools were chosen to represent a range of grade levels, SAT-9 deciles, and geography.

[7] Formerly known as the Comprehensive School Reform Demonstration (CSRD) program.

[8] The CDE selected 351 schools that had never participated in II/USP or CSR for this new program. In addition, 307 schools that had been participating in either II/USP or CSR received additional funding through HPSGP. Cohort 1 jointly-funded schools received one year of implementation funds under HPSGP, Cohort 2 schools received two years of implementation funds under HPSGP, and Cohort 3 jointly-funded schools received all three years of implementation funds under HPSGP.

[9] A third year of implementation for state-funded schools

[10] Schools could also enter state monitoring if they made some growth during the two implementation years (but did not meet growth targets), but experienced negative or no growth in any year thereafter.

[11] The SAIT first assesses whether a school has the "essential program components" (EPCs) deemed necessary for improved student achievement. The EPCs vary by grade level, but in general include components such as the implementation of State Board of Education-adopted curricula, AB 75 training for principals, and the implementation of an assessment system to monitor student progress. In schools where these components are missing or not fully implemented, the goal is to fully implement them.

[12] Neither system accounts for the achievement growth of individual students over time.

[13] Both schoolwide and "comparable improvement" targets

[14] Corrective actions could include the replacement of district staff or appointing a state trustee in place of the superintendent, among others.

[15] For example, Cohort 1 II/USP and comparison elementary schools gained approximately 190 API points between 1998 and 2004, while Cohort 1 II/USP and comparison middle schools gained an average of approximately 107 points since 1998. Cohort 1 II/USP and comparison high schools increased by an average of approximately 79 API points in this same time period.

[16] NAEP, a norm-referenced and criterion-referenced test of student achievement, has been administered nationally approximately every two years since 1990.

[17] When states were ranked by average performance on NAEP tests between 1990–2003 (normalized on the national mean and standard deviation), California ranked lower than all other states except for Louisiana and Mississippi (Carroll, et al., 2005).

[18] After the first two years of implementation. However, many schools did receive an additional year of funding.

[19] We draw primarily on findings from the 2003 and 2005 state-sponsored independent evaluations of the II/USP.

[20] For HPSGP, the legislation requires a school site Action Plan, but does not require a planning year nor the hiring of a state-approved External Evaluator. However, nearly all schools did participate in a planning year, and schools were expected to hire an external entity for support in developing the Action Plan. Schools could work with their district or county office for this support in developing the Action Plan, and the legislation for HPSGP required that school staff and administrators participate in specific trainings, including AB466 professional development associated with the state-adopted curricula.

[21] Including training for teachers and principals on State Board of Education-adopted instructional materials and intervention programs (AB 466 and AB 75)

[22] Texas, New York, Florida, and Illinois

[23] 230 out of the 368 HPSGP schools that were not in II/USP are also in Program Improvement.

[24] SB 1453 requires the establishment of the California Longitudinal Pupil Achievement Data System (CALPADS) that includes statewide assessment data, enrollment data, and other demographic data required to meet federal NCLB reporting requirements. In addition, unique student identifiers must be assigned to all K–12 students enrolled in California public schools. (See: http://info.sen.ca.gov/pub/01-02/bill/sen/sb_1451-1500/sb_1453_bill_20020927_chaptered.html.)

REFERENCES

Argyris, C., & Schon, D.A. (1978). *Organizational learning: A theory of action perspective*. Reading, MA: Addison Wesley.

Bitter, C., Perez, M., Parrish, T., Gonzalez, R., Socias, M., Salzfass, L., Chaney, K., Gubbins, P., Anand, P., Dawson, K., Yu, V., Delancey, D., & Esra, P. (2005). *Evaluation Study of the Immediate Intervention/Underperforming Schools Program of the Public Schools Accountability Act of 1999.* Palo, Alto, Ca: American Institutes for Research.

Carroll, S.J., Krop, C., Arkes, J., Morrison, P., Flanagan, A. (2005). *California's K-12 public schools: How are they doing?* Santa Monica, CA: RAND Corporation.

Esch, C.E., Chang-Ross, C.M., Guha, R., Humphrey, D.C., Shields, P.M., Tiffany-Morales, J.D., Wechsler, M.E., & Woodworth, K.R. (2005). *The status of the teaching profession in 2005.* Santa Cruz, CA: The Center for the Future of Teaching and Learning.

Finnigan, K.S. & O'Day, J.A. (2003) *External Support to Schools on Probation: Getting a Leg Up?* (In Press) Research report jointly published by the Consortium for Policy Research in Education and the Consortium on

Chicago School Research, University of Pennsylvanian, Philadelphia, PA.

O'Day, J.A. (2002). Complexity, accountability, and school improvement, *Harvard Educational Review*, 72, 3. 293-329.

O'Day, J.A. and Bitter, C. (2003). *Evaluation of the Immediate Intervention/Underperforming Schools Program and the High Achieving/Improving Schools Program of the California Public School Accountability Act of 1999*. Palo, Alto, CA: American Institutes for Research.

Williams, T., Kirst, M., Haertel, E. et al. (2005). *Similar students, different results: Why do some schools do better? A large-scale survey of California elementary schools serving low-income students.* Mountain View, CA: EdSource.

CHAPTER 5

Evaluating State Intervention: The High Priority Schools Grant Program

Thomas Timar
University of California, Davis

IN THE DAYS WHEN THERE STILL WAS SUCH A THING AS A CALIFORNIA ASSESSMENT PROGRAM (CAP), NEWSPAPERS AROUND THE STATE ROUTINELY PUBLISHED SCHOOL TEST SCORES. FOR THOSE WHO KEPT TRACK AND CARED, IT WAS A DISHEARTENING RITUAL, MOSTLY FOR ITS PREDICTABILITY. IT WAS FAIRLY EASY TO PREDICT A SCHOOL'S SCORE FROM YEAR TO YEAR, KNOWING NOTHING MORE THAN THE PREVIOUS YEAR'S SCORE. And while there may have been some marginal changes here and there, yearly rankings were quite consistent. Schools at the bottom tended to stay there. What made bad news worse was the inexorable connection between the socioeconomic status (SES) of a school's student population and test scores. California has long since stopped administering the CAP, but low achievement persists among large numbers of students—particularly those who are poor, do not speak English, and whose parents lack formal education.

What has changed is how policymakers have structured the problem of persistently low levels of student achievement. The impetus for that change has been the enactment of state accountability laws (in combination with No Child Left Behind) and the development of curriculum and performance standards. As a result, it is now much more difficult, if not impossible, for policymakers, teachers, administrators, school boards, and the public to simply accept persistently low student performance as an unpleasant fact. Enactment of the Public School Accountability Act (PSAA) in 1999 created a massive and complex regulatory structure in the state that holds schools responsible for student achievement. A critical feature of the accountability system is a variety of state interventions—a combination of technical support and sanctions—that are meant to force schools to address the problem of low student performance in their schools.

The year PSAA was enacted, there were roughly 1.2 million students in Decile 1 through 3 schools. The average Academic Performance Index (API) of those schools was 473, with a low of 297 and a high of 561.[1] Of those students, 79% were eligible for free or reduced meals, 45% were English learners, 67% were Hispanic, 12% were African-American, and 32% of students' parents had only a high school education, while 38% of students' parents did not have a high school education.[2] The characteristics of Decile 1 schools in 1999 were similar though more pronounced.

The average API for the 685 Decile 1 schools was 417. Of those students, 75% were Hispanic and 13% African-American, 56% were English learners, and 86% were eligible for free meals. About one-half of the parents of children in Decile 1 schools did not have a high school education.

In rather stark contrast, in 1999 there were slightly over 1 million students in Decile 8 through 10 schools. Average scores in these schools was 787. Among students in those deciles, 14% were Hispanic, 4% African-American, 8% English language learners, and 18% eligible for free meals. Among the parents in this group, 35% were college graduates and 21% had graduate degrees.

School accountability and the sanctions associated with them raise the question of what to do about low-performing schools to help them improve. The Immediate Intervention/Underperforming Schools Program (II/USP) that Bitter and O'Day discuss in Chapter 4 was the policy centerpiece for state intervention. Policymakers believed that a combination of discretionary funds, school-wide planning, and external technical assistance would coalesce into solid gains in teaching and learning in these schools. As Bitter and O'Day show, these programs were voluntary and only enrolled a fraction of eligible schools. In addition to II/USP, the Legislature created the High Priority Schools Grant Program (HPSGP) to target Decile 1 schools.

This chapter examines state efforts to improve instruction in the lowest performing schools—those receiving HPSGP funds. The chapter first assesses past strategies to address the problems of persistent low achievement in schools, a problem that is most acute among schools that serve large numbers of non-English-speaking, students of color from disadvantaged socioeconomic backgrounds. It then discusses preliminary findings from an ongoing study of schools in the HPSG program.[3] The paper identifies some of the strengths and weaknesses in the program and makes recommendations for its improvement.

COMPENSATORY PROGRAMS AND SCHOOL IMPROVEMENT

California's Public School Accountability Act (PSAA) signals an important shift in how policymakers and practitioners think about the problem of low student performance. In theory, the change is away from a compensatory, regulatory model based on categorical program support to a capacity building and accountability model. It reflects a major change in how the problem of low student achievement is defined and how solutions to it are structured. Most significantly, the focus has shifted from *low-achieving children* to *low-performing schools*. This sea change in education policy redefines educational roles, responsibilities, and professional relations within the public education system.

The history of compensatory education is synonymous with the history of Title I of the Elementary and Secondary Education Act. A primary purpose of the law was to provide financial assistance to school districts that suffered from the adverse "impact that concentration of low-income families have on [their] ability…to support adequate educational programs."[4] Its other purpose was to provide direct support to children by funding programs to meet their "special needs."[5] In an effort to secure local compliance—to guarantee that federal funds were flowing only to eligible students—the U.S. Office of Education cast an ever widening regulatory net. While these efforts are well documented, it is important to note that regulations implementing Title I focused primarily on changing the legal and political organizations of schools.[6] These regulations—which included the elaboration of substantive and procedural rights, the requirement for clear audit trails for local expenditure of federal dollars, federal and state sanctions for misuse of funds, the growth of a vast state and local bureaucracy to monitor local compliance, and the empowerment of local community groups as a countervailing force to local school authorities—eclipsed the pedagogical dimensions of federal compensatory aid.

The policy framework of Title I shaped behavior in schools in several unintended ways that, in the long term, inhibited organizational effectiveness. The preoccupation of policy with regulatory compliance denigrated instructional practice by undercutting professional judgment and authority and fragmenting both schools and students. Instead of focusing on the whole child, policy dissected children into disparate program targets. Though it seems naïve in retrospect, federal policymakers believed that stretching a regulatory net over schools could overcome the incapacity,

ineptitude, or indifference of local schools serving poor, low-achieving students. While such strategies did force some schools to improve, it undermined those educators who were making good-faith efforts to serve those children (more in Chapter 8).

State policies directed at schools serving disadvantaged students mirrored federal policy. California's funding counterpart to Title I was Economic Impact Aid, which targeted low-income, minority students. At the end of the 1970s, the largest administrative unit within the California Department of Education was the Field Services Unit, which was responsible for monitoring and reviewing local compliance with federal and state compensatory programs. The state regulatory framework for education was rooted in distrust of the motives and capacity of local school officials. At the state level, officials came to share Washington's belief in stressing compliance as distinguished from assistance.[7]

The major difference between the regulatory model and the accountability model is that under the previous model schools could be sanctioned for failing to follow rules, but they could not be sanctioned for not teaching students. Implicit in both federal and state policies was the belief that schools could develop effective programs for disadvantaged children without paying attention to the overall quality of the school. Simply put, they believed that good programs could trump bad schools.

The shift toward accountability and student outcomes began with the Hawkins-Stafford Amendments to Chapter 1 (which replaced Title I during the Reagan years) enacted in 1988. Among the many changes initiated by the legislation, the most important were those concerning program coordination, school-wide projects, school performance accountability, and parental involvement. The amendments marked a significant shift in Chapter 1 policy by emphasizing program effectiveness and accountability. Chapter 1 schools were required to develop student outcome goals, and schools failing to meet those goals were required to develop school improvement plans. Congress also urged districts to adopt local standards and measures of student progress that were based on proficiency.

As Bitter and O'Day point out in the previous chapter, California moved in a similar direction. In part, this was due to federal requirements contained in the reauthorization of Title I. The law required states to develop performance standards and assessments as a condition of receiving federal funds. As the authors show, California was first among states to develop curriculum frameworks, academic content standards, and assessments. Enactment of the Public School Accountability Act (PSAA) in 1999 completed the shift to an outcomes-based accountability system in which schools, theoretically at least, were responsible for the academic progress of all students, and instructional improvement superseded regulatory compliance.

THE HIGH PRIORITY SCHOOLS GRANT PROGRAM

A central feature of California's school accountability system are programs to engage low-performing schools in improvement efforts. One of these, which is discussed in the previous chapter, is the Immediate Intervention/Underperforming Schools Program (II/USP). The other, the High Priority Schools Program (HPSGP) is similar, but targets Decile 1, rather than Decile 1 through 5, schools. While the two programs are structurally similar, the HPSGP places some additional requirements on schools.

The HPSG Program was created by Assembly Bill 961 (Chapter 747, *Statutes of 2001)* to provide additional funds to the lowest performing schools in the state. To be eligible for funding, schools must rank in the bottom decile of the state's API. Participating schools receive $400 per pupil for a period of three years. Districts are required to match state funding with $200 per pupil annually. Over the life of the program, this amounts to $1,800 per pupil or $1.4 million (including the local match) for a school of 900 students—the average school size in the HPSG program. A few of the largest schools received over $5 million. Over the three-year funding cycle—2202-03 through 2004-05—HPSGP allocations to districts were slightly over $754.9 million. In return, schools had to meet state benchmarks for improved student academic performance. Schools failing to improve face various sanctions and interventions, including state takeover and dissolution.

HPSG schools must also participate in a state-specified professional development program for

teachers (AB 466), yet another for principals (AB 75), and must purchase state-adopted textbooks in reading-language arts and mathematics. Schools must also hire external consultants or "evaluators" and create "action-plan teams" to assist in developing a school improvement plan—the components of which are specified in state law. Finally, schools must comply with a long list of state requirements specifying parent and community engagement in the improvement process.

The structure of the HPSGP is such that schools receive funding for three years with the possibility of an additional year if they are making "adequate progress." The implied rationale is that three years of funding will result in significant capacity building and sustainable organizational improvement. Success is conditioned by several factors. First, it requires schools to take a long view; yet, schools are under considerable pressure to show short-term results in order to avoid sanctions. Second, it assumes that schools have the flexibility and autonomy to allocate HPSG funds in a manner that is consistent with reform priorities and objectives.

As a condition of receiving HPSGP funds, schools must also agree to engage in various activities. Teachers and administrators are required to participate in professional development programs.[8] Schools must purchase approved, standards-aligned textbooks in reading and mathematics if they do not already have them. They must also engage external consultants to assist in the development of a school Action Plan. Schools may apply for a $50,000 planning grant to develop their actions plans. The Action Plan must be based on an initial needs assessment, it must be research based and data driven, and must encompass a strategic plan for helping low-performing students.

The legislation lists a number of options that may be included in the strategic plan. They include common planning time for teachers, support staff, and administrators; mentoring for site administrators and peer assistance for teachers, particularly new teachers; professional development activities, particularly in mathematics and reading and literacy; and incentives to attract credentialed teachers and quality administrators.[9] External evaluators are required to engage parents throughout the planning process, and each school's site council is required to sign off on the school improvement plan.

While legislation creating the HPSGP provides a lengthy list of school improvement actions that schools may take, the legislation is more permissive than prescriptive. Schools are required to address pupil literacy and improvement; quality of the staff; parental involvement; and adequacy of facilities, curriculum, instructional materials, and support services. Legislation provides various examples of how schools may address those issues, but leaves it to districts to adjust the details to the specific needs of each school. More than anything, the legislation embodies a set of expectations for schools about how they might address instructional improvement. The bill's language places considerable emphasis on comprehensiveness, collaboration, planning, assessment, focus on reading across the curriculum, community engagement, mentoring, professional development, and beginning teacher training. The measure delineates the essential components of a school improvement plan, but leaves schools considerable room to develop a plan that meets local conditions and needs.

In order to assess their progress in meeting academic growth in core curriculum areas and to monitor the efficacy of their school improvement plan, schools are strongly encouraged to revisit their action plans and to modify them as necessary.

After three years of participating in the program, a school that has not met its growth targets or has failed to show "significant growth," as determined by the State Board of Education, is required to enter into a contract with a school assistance and intervention team (SAIT). Members of the SAIT are individuals who "possess a high degree of knowledge and skills in the areas of school leadership, curriculum and instruction aligned to state academic performance content and performance standards, classroom discipline, academic assessment, parent-school relations, and have proven expertise specific to the challenges inherent in low-performing schools." (EC 52055.650. (1)(A) Finally, schools that fail to meet their growth targets are subject to various sanctions. These include reassigning students to other schools, reassigning teachers, renegotiating the collective bargaining agreement, reorganizing the school, and closing down the school.

THE HPSGP AND SCHOOL IMPROVEMENT

The shift from a school accountability system driven by inputs, regulation, and compliance to a system based on outcomes necessitates a major shift in the process of schooling and a new conception of the organization of schooling. The traditional view of the school sees it as a collection of classrooms. Teachers had considerable autonomy in what to teach and how to teach. More importantly, teachers were responsible only for their classrooms—for what went on behind the classroom door. Organizational theories of schools described them as "loosely-coupled organizations," whose commonalities were anchored in "myth" and "ritual" that had little to do with the underlying technology of teaching.[10]

Organizational coherence was thought to be imposed by textbooks, teacher preparation and professional development, and some level of supervisory oversight. Consistent with theories of "loose coupling" were school decision-making theories described as the "garbage-can" model. Instead of a coherently articulated model of decision making based on organizational goals and strategies to attain them, decision making in schools was best described as individuals reaching for readily available solutions to satisfy immediate needs. Both the traditional school organizational model and decision-making model are the antithesis of coherent, long-term, organizational planning.

Consequently, a central hypothesis of the study was that HP schools that improved were ones able to transform themselves from a collection of classrooms into coherent, purposeful organizations. We assumed that this would occur as schools increasingly were held directly accountable for the performance of their students. Unlike in the past, it no longer mattered if the first grade teacher was doing a wonderful job with her students if the other teachers in the school were not.

It soon became evident that the need for organizational coherence and collaboration was all the more important in low-performing schools. As Table 1 shows, Decile 1 schools serve large numbers of poor children, many of whom are English learners, and come from families lacking formal education. Unlike high-performing schools that serve high SES students, organizational factors are likely to be much more important in low-performing schools. As a group, students in low-performing schools lack the social and intellectual capital of high SES students. As organizations, high performing-schools (largely because of their students) can continue to do what they were doing. Low-performing schools, on the other hand need to learn how to do things very differently. Doing more of the same is unlikely to raise levels of student achievement.[11]

The strategic underpinning of the HPSGP is that an infusion of money, external technical support, a comprehensive school plan, and the threat of sanctions for failure to perform will catalyze the kind of organizational transformation that turns low-performing schools into high-performing (or, at least higher-performing) ones. The policy assumes, moreover, that three years is sufficient time to build the necessary capacity in schools to affect those changes.

STUDY METHODOLOGY

The magnitude of the state's investment in low-performing schools—nearly $3 billion over a three-year period—begs the question of what difference that investment has made. This study does not attempt to answer that question on a systemic level.[12] That is, the study does not address the question of whether schools receiving HPSG funds did better as a group than those schools that did not. Instead, it seeks to answer the question of whether some schools participating in the state intervention program were more successful than others in meeting student achievement goals. Did schools that met their API growth targets each year and by all subgroups share common characteristics? Conversely, what did schools that did not meet growth targets have in common? As noted earlier, the legislation that created the HPSGP gives schools considerable flexibility in designing improvement strategies. While such flexibility is desirable—as it allows schools to tailor school improvement strategies to their particular needs and circumstances—it also creates the possibility that program funds will be mismanaged and wasted. The schools we studied exemplify both outcomes.

The study's research questions flow from two key features of the HPSGP. One was the amount of money

it provided schools. Participating schools received $400 per pupil for each of three years. For the average Decile 1 school of 900 students, that meant over $1 million. Some schools received as much as $6 million over the three-year period. The fact that funding was limited to three years became problematic for most schools. Over the three years that schools were in the program, they had to show continuous progress toward meeting API growth targets. If schools failed they were subject to various sanctions, beginning with the assignment of a school assistance and improvement team to oversee and direct improvement efforts. Additional sanctions could lead to reassignment of the teaching and administrative staff or, in the worst case, school closure. How these features play out in the program's implementation is discussed in greater detail below.

Data for this study comes from school-site visits to 15 schools. Of the 15 schools we studied, 10 were high schools and the remainder elementary schools; 11 were urban, while 4 were rural. The site visits comprised structured interviews with principals, teachers, HPSGP and special program coordinators, and school-site council members. Interviews took place between February and May of 2006.

In order to assess the impact of participation in the HPSGP, we wanted our sample to include both what we regarded as improving schools and non-improving schools. Initially we classified improving schools as those that had meeting API targets for all subgroups for each year of program participation. Due to the difficulty of getting access to districts, we relaxed this condition to include two schools

TABLE 1: Comparison of Selected Characteristics of Case Study Schools to all California Schools

School Indicators	Mean	Minimum	Maximum
Enrollment	1400	~260	~5000
% English Learners All Decile 1 schools All CA schools	40 46 25	11	76
% Free Meals* All Decile 1 schools All CA schools	70 80 50	45	97
% Minority** All Decile 1 schools All CA schools	92 90 64	69	100
% Full Teacher Crd. All Decile 1 schools All CA schools	90 88 94	73	100
API Base Scores 04-05	619	531	726
API Gain (01-02 to 04-05) % change	138 30	68 14	240 62
Avg. Parent Education*** All Decile 1 schools All CA schools	1.97 2.0 2.56	1.3	2.7

Source: California Department of Education

* "Free Meals" represents students who are eligible for the free and reduced lunch program; it is a proxy for poverty.

** The "Minority" category comprises Hispanic and African American.

*** Average parent education is represented by values from 1 to 5 where 1 represents "Not High School Graduate" and 5 represents "Graduate School."

that had not met program targets in the first year, but made them in subsequent years. The so-called non-improving schools were those that had missed API growth targets in two or more years. The CDE assigns "red," "yellow," and "green" lights to schools based on their success in meeting growth targets. Our "improving" schools all had green lights in the last three years, while non-improving schools had red and yellow lights. Table 1 profiles the schools in our study sample.

The data in Table 1 reveals that the study sample of schools mirrors the general population of Decile 1 schools fairly closely. It also shows that Decile 1 schools generally—and this is certainly true for the schools in our sample—have a higher percentage of poor, non-English-speaking students than the average school in the state. Parents of students in Decile 1 schools and in our sample have lower levels of formal education than the state average. Roughly half of the parents in our sample have not completed high school. The average parent education level for all students, on the other hand, is to have completed some college. Parent education is particularly important in relation to student achievement due to the high correlation between the two as measured by the API. Nearly 50% of the differences in average school API scores is explained by differences in the average education levels of parents.

STUDY FINDINGS: THE CONDITIONS FOR SCHOOL IMPROVEMENT

While we classified schools as improving or non-improving in selecting schools for study, in reality the classification was not clear-cut. We found significant variation among "improving" schools as well as among "non-improving" schools. One improving school had a gain of 146 points over a four-year period, while another had nearly 300. Non-improving schools may have missed their targets by only a couple of points or may not have tested enough students. Some schools that fit the non-improvement profile had many of the same organizational characteristics as the improving schools. On the other hand, some schools that were, by most organizational standards, fairly chaotic and unorganized, were in fact improving.

Initially we thought that it might be possible to clearly differentiate the characteristics of improving schools from non-improving schools. The reality turned out to be less clear-cut than we originally envisioned. Some of our non-improving schools were engaged in many of the same activities as our improving schools, yet API gains were quite different. Conversely, schools that might have been predicted to be non-improving made considerable gains in their API scores. However, as we looked more carefully at schools in their efforts to improve, we were able to identify some key factors that affected implementation of the HPGSP.

In the following section we discuss the factors that either facilitated or impeded implementation of the HPSGP. Figure 1 contrasts factors facilitating school improvement as opposed to factors impeding school improvement. As already noted, these do not map perfectly into improving and non-improving schools, but they do represent extreme ends of a continuum for school improvement. This section focuses on what we consider to be the most important differentiating features of improving and non-improving schools.

Organizational Stability and Continuity

Without doubt, among the most significant factors facilitating school improvement are organizational stability and continuity. These two factors can take various forms. In our study we found a high degree of trust among teachers, administrators, and support staff. In improving schools generally, there was a high level of professional regard among faculty, support staff, and administrators. In interviews, teachers, program specialists, and principals talked about the importance of working together as a team. In one high school in particular—coincidentally the one with the greatest increase in API scores—teachers talked about how they not only enjoyed working together, but also enjoyed socializing together. In addition to being colleagues, they considered many of their colleagues their friends. It should be noted that this was a fairly young faculty, with teachers possessing five or fewer years of teaching experience. Many had gone through the same master's program in teaching at a nearby university, so they had known one another there. Even though the school did not have a principal (two individuals served as acting principals), those whom

FIGURE 1: Factors Facilitating Improvement vs. Factors Impeding Improvement

Factors Facilitating Improvement	Factors Impeding Improvement
■ Organizational stability and continuity • High degree of social capital and trust • Stable teaching staff • Stable and competent leadership • Focus on developing leadership among teachers • Focus on school as the organizational unit rather than a collection of classrooms ■ Leadership and vision ■ Action plan that is working/living document that reflects strategic planning • Organizational coherence • Commitment to an improvement strategy • Ongoing assessment and evaluation ■ Collaboration and professional development ■ External support ■ Coherent program funding is tied to strategic plan	■ Organizational instability and constant change ■ Organizational fragmentation and individual isolation • Classroom rather than school centric focus • High turnover among teacher and administrators ■ Compromised leadership • Lack of district support • High staff turnover • Lack of leadership skills ■ Action plan developed for funding purposes; ignored once funding approved • No coherent or consistent improvement strategy • No commitment to change ■ Little or no technical assistance or support ■ Program budgeting is opportunistic and ad hoc

we interviewed expressed a great deal of respect for their competence, dedication, and leadership. They trusted their professional judgments, regarded them as knowledgeable about school improvement, and looked to them for professional support.

In contrast, the loss of a sense of community and lack of program continuity was quite apparent in a non-improving high school that had become a SAIT school (a school subject to intervention by a state appointed School Assistance and Intervention Team). The school's attendance area had changed within the past five years because a nearby high school had been converted to a junior high, and many students living in the area were now being bused in to the SAIT school. According to school staff, students did not feel connected to the school. Annually, there was high turnover among students (not counting incoming freshmen and graduating seniors). High numbers of disciplinary referrals, frequent altercations among students, and a lack of respect for others became routine features of the school.

When asked what seemed to be the major problems confronting the school, a parent who chaired the school site council noted the high turnover among staff and students. She saw little incentive for teachers to stay in the school. As she saw it, there was little continuity from one year to the next. She noted rather ruefully (and at times tearfully) that:

> We moved from years of having money—money that was well spent and helped kids—to SAIT, and now it's as though it [the improvements] never happened. Teachers were excited about the professional development that they got. And now the state is here with its scripted learning. It's really demoralizing for teachers.

A consistent theme among improving schools was the importance of teachers taking responsibility and leadership for school improvement. This response took several forms. One was a sense among teachers that school improvement is a collective responsibility and a cooperative effort. Another was the importance of common planning time, or in the case of high schools, department-specific and teacher-planned professional development activities. Teachers, administrators, and staff working together to achieve a common goal was a consistent theme that ran through the interviews in improving schools.

Leadership

The importance of leadership is closely connected to the importance of organizational stability and continuity and social capital in schools. In both improving and non-improving schools, leadership played a central role. Leadership played out in various

ways: stability and longevity, expertise, collegiality, and authority. In improving schools, principals had been at the school for a number of years, and generally their tenure at the school preceded the school's participation in the HPSGP. Some had taught at the school before becoming principal, while others had held various administrative positions.

The relative longevity of principals in improving schools contrasts dramatically to the rapid turnover of principals and other administrative staff in non-improving schools. The most egregious case of leadership instability was in a school that, over a 30-year period, had had only one principal who was in the position for more than two years. One principal lasted for three years and was demoted in the middle of her fourth year by the school board. The constant turnover at the school, moreover, mirrored the turnover of superintendents at the district. The school board hired and fired principals at will. One school had seen six principals come and go in eight years. The fact that it was a huge school with year-round attendance tracks made the need for stability and continuity even more acute.

Teachers and administrators in schools and districts with high administrative turnover and dysfunctional district leadership were generally operating in "survival mode." As a result, there was little to no focus on school improvement. In one school, most teachers carried on as best they could but were demoralized, and therefore sought other jobs. In one school, teachers talked about how fragmented the school was. Improvement programs would get designed, but not implemented. Money for programs was non-existent; and teachers had no idea what funds might be available for school improvement. According to teachers at one school, most school improvement programs like AVID (Advancement Via Individual Determination) existed on paper, but not in reality.

As our study revealed, leadership is about more than just continuity and stability. The principal's ability to help the school shape a vision for reform, guide development of a strategic plan, and elicit cooperation and support from the school community is another significant factor. The extent to which the school remained faithful to the goals guiding the action plan was largely attributable to the principal's leadership. While the principal's role in managing improvement within the school is important, so is the principal's role in connecting the school to the community. In a rural elementary school that serves largely Latino children, the principal stressed the importance of providing leadership to the community. As a Latina, she emphasized the importance of being "a role model for girls so that they can see the that they can have professional careers." In a school where 63% of students are English learners and 100% are eligible for free lunches, the principal believed that an important aspect of her job was to make the school a "community place." She told interviewers that she knew the names of 99% of the students in the school, and also made it a point to know students' families and to have dinner with them.

Leadership was the glue that held school improvement efforts together. It was the principal who helped shape a vision for school improvement, kept the school on track and focused, mobilized the necessary resources, and generally helped to shape the school's culture. In our conversations with teachers in improving schools, they consistently cited the importance of leadership. They praised their principal for his or her dedication, hard work, and commitment to improvement. Among schools with the greatest improvement, teachers readily acknowledged the critical role played by the principal. "It would not have happened without her," or his or her "leadership and dedication were what has made the school successful" were common responses to questions about the principal's role in improving schools.

The Action Plan

All schools must develop action plans that detail their reform strategies over the course of the HPSGP. The plan must be approved by the school site council. Regulations related to the HPSGP require schools to contract with an "External Evaluator," who helps the school develop its plan. Schools are required to report annually to the CDE on their progress in meeting improvement goals that they established in their plans. In addition, schools have to develop a budget that showed how program funds relate to specific improvement strategies. Among HPSGP action plans there were also significant differences between improving and non-improving schools. The main differences could be found in the plan's coherence, ability to measure progress, and its implementation.

In improving schools, the action plan tended to be a "living" document, one that mapped a strategy for school improvement efforts. Action plans and the program budgets that supported those plans were reviewed on a regular basis. The action plans in these schools also had measurable school improvement benchmarks—based on state content and performance standards—that could be used to measure a school's progress toward meeting its goals. If needed, strategies were changed and resources were reallocated in order to meet improvement targets. The overall vision did not change, however. What changed were specific activities. In some schools for instance, in which improving student literacy was central to improving achievement, the schools might change specific professional development activities or focus on different kinds of supplemental support if goals were not met. The focus on literacy remained constant.

In non-improving schools, improvement goals tended to be fragmented and expressed as disparate programs or activities. One school, for instance, spent most of its HPSGP funds in the first year on hand-held computers that students could use to help them with their homework. For various reasons (according to some teachers, students simply got bored with them), the computers were not used and the program was abandoned after the initial year. In non-improving schools, not only were action plans lacking a coherent, articulated plan for improvement, but they also tended to be ignored after the schools had applied for their first HPSGP grants. For example, a principal in one school not only knew nothing about the school plan, but knew nothing about the HP program. The principal only learned of it two days before our site visit. At that time this principal had been in the position for six months, having taken over when the previous principal was demoted to vice principal.

In other schools, the action plan had nothing to do with the school's improvement efforts or its budget for HPSGP. It was submitted with the application and then left to gather dust. The major difference between improving and non-improving schools regarding their action plans was that in improving schools the action plan was exactly what it was meant to be—a strategic plan for charting a course for school improvement. In one school in particular, faculty were surveyed each year to evaluate the school's success in meeting the goals in the action plan. If there were deficiencies in the action plan, teachers were asked how those might be remedied. In non-improving schools, the action plan existed to comply with the state's requirement that HP schools have one.

Collaboration and Professional Development

One of the most striking features of improving schools is their attention to collaboration among teachers. In improving schools, it was a singular focus among teachers at each grade level or department level. To facilitate collaboration, school schedules were changed to leave a portion of one day each week for various activities such as program planning or peer coaching. In other instances, teachers were paid to participate in various school-organized workshops held either on Saturdays or during summer break—often both. In improving schools, planning, strategizing, and evaluating activities were fixed features of a school's regular schedule. They were ongoing and focused on the school's improvement goals. Similarly, professional development in improving schools was not generic—that is, provided by the district or county or some other provider—but school specific. Professional development activities were an integral component of a school's improvement goals.

Professional development activities in improving schools took various forms as they were tailored to school needs. Most common were peer and literacy coaching. It is worth noting that all improving schools placed considerable emphasis on literacy and writing. Most often schools would hire literacy coaches to work on a regular, full-time basis with teachers across all subject areas with the goal of improving their students' reading and writing skills. One high school had instituted a program of reading and writing across the curriculum so that students in all courses had regular reading and writing assignments. In physical education dance classes, students read works of literature and had to discuss themes, movement, tone, and the like and discuss how these elements might relate to choreography. In biology students had to use the Cornell method of note taking. In one school, peer coaching took the form of teams of four teachers engaged in year-long activities. They would meet regularly to discuss teaching and learning strategies, would videotape one another's classes to observe instructional strategies, and debrief on what they had learned from observing one another's teaching.

In non-improving schools, the most pronounced difference to professional development was the generic nature of its activities. Generally they tended to be district sponsored, focusing on broad issues related to state content standards and assessments. While these issues may be important to teachers, they may be somewhat distant from the classroom if not incorporated through specific activities. In non-improving schools, it was often teachers, on and individual basis, who decided what professional development activities to attend. One non-improving school, for instance, allocated part of its HPSGP budget for teachers to attend conferences on gifted and talented education programs.

External Support

One of the chief factors facilitating school improvement among schools in our study was an ongoing relationship between the school and an external agency. The strongest and most enduring relationships were between the school and a university. One school had a seven-year collaborative relationship with a school of education in one of the California State University campuses. The school's participation in HPSGP was initiated by their university mentor, and university personnel assisted in the proposal's development and implementation. The university conducted needs assessments, and helped the school identify the resources necessary to meet their improvement goals, develop program priorities, and assist in writing an action plan. The collaboration precedes and goes beyond the HPSG program. The university partners with the school in its teacher training program. Students in the teacher credentialing program are placed in the school for their practice teaching experience. In turn, new faculty are hired from this pool.

Another school had a close relationship with one of the University of California campuses. At the time of our study, the school had been open for about six years. Most of the teachers were young, and most had recently completed the master's program in teaching at the university. The university also used the school for its teacher training program. Teachers whom we interviewed all regarded the ongoing relationship with the university as a key feature of school improvement. The relationship also provided teachers with a professional anchor—a way to stay in touch with educational issues and problems beyond the immediate school setting.

In some instances the external evaluator provided mentorship and technical assistance to the school. But the role of the external evaluator as a source of support was quite uneven among the schools in our study. Some external evaluators helped schools to conduct needs assessments, assisted them with data analysis, guided development of school action plans, and continued to work with the school over the course of the HP program. Others provided what seemed like an off-the-shelf action plan (in one instance the external evaluator had not even bothered to change the name of the school). For the most part there was little or no ongoing engagement or rapport with the school.

The specific source of technical assistance to the schools (whether it comes from a university, a nonprofit organization such as WestEd, or a private consultant) does not appear to be significant. On the other hand, factors that matter include the technical assistant's level of engagement and relationship with the school and its faculty. As discussed earlier, low-performing schools have tremendous challenges to overcome in order to improve. If schools already had the knowledge and skills to improve teaching and learning, it seems logical that they would do so. The fact is that they do not have the organizational capacity to turn schools around. They need assistance from an outside source willing to take time to understand a school's problems and to put in the time and energy to develop strategies to overcome those problems.

Program Funding

While just about everyone whom we interviewed agreed that program funding "had made a difference," just what that difference was varied widely. In some schools, the money was used to "backfill existing needs." In these schools, funding was regarded as a windfall to the school to pay for a long list of things that the school had not been able to afford out of its regular budget. In some instances this meant funding new administrative positions; hiring teaching coaches or other supplemental personnel; purchasing computers, software, and instructional materials; supporting a variety of professional development activities, including paying teachers' costs to attend conferences; buying time for teacher collaboration; contracting for technical assistance; and purchasing assessment instruments and supplies.

Consistent with our other findings, the use of additional resources among schools can be differentiated by whether funds were integrated into a coherent program of school improvement or whether they constituted a school's "wish list." Schools that had already committed to a school improvement strategy generally regarded program funding as an opportunity to continue what they were doing, but with additional resources. For instance, schools whose improvement strategy focused on improving literacy hired literacy coaches to work with each grade level in elementary schools or each department in high schools. Professional development activities focused on how to integrate reading and writing into all teaching and learning activities—including physical education at one high school. Regular assessments measured how well the school was doing in meeting its student achievement goals. In contrast, the "wish-list" schools had no coherent strategy for spending HPSGP funds. Money was simply regarded as an opportunity to take care of a variety of unmet needs. Some schools had little or no idea how much money they were receiving from the HPSGP. In some cases, they were given a budget by the district and told to spend the money until it ran out.

How each school used its HPSGP funds revealed a great deal about the school's culture. Schools that were collections of classrooms and teachers with minimal interaction, planning, or collaboration—in short, schools that were organizationally fragmented—used HP monies in a fragmented, opportunistic way. On the other hand, schools with a vision and a coherent plan used funds in a purposeful manner. Another way to explain these differences is along a continuum with program spending that is "need-driven" at one end and "goal-driven" at the other. Exemplifying the former, one non-improving school allocated its HPSGP monies by categories: 25% to technology, 35% to professional development and supplemental instruction, 15% for materials, 5% for improving the school environment, and 20% for administrative services. According to those involved in developing the HPSGP budget, the allocation ratios reflected the need to "give a little to everyone." The principal was pessimistic about the benefits of additional resources, as he perceived it was more money for "just doing more of the same." Exemplifying goal-driven schools were those with highly focused strategies for changing teaching and learning. In these schools, HPSGP funding was allocated to support improvement goals.

An overriding issue related to the HPSGP concerns the duration of funding and the ability of schools to carry over unexpended funds. Everyone whom we interviewed was concerned about the termination of funding at the end of three years. Several interviewees noted that making decisions about the use of resources for school improvement is not something teachers, parents, and administrators have much experience doing. Implementing the HP program requires schools to develop new decision-making skills. Traditionally schools have not had $1 million or more to allocate at their discretion for school improvement. Principals are given their annual budgets by the district. In high schools, department heads may have a budget for books or supplies, but those budgets are generally fixed. Using HP monies effectively for school improvement places huge and entirely new demands on schools. School site councils, administrators, and teachers must be able to conduct needs assessments, develop multi-year improvement goals and strategies, evaluate progress in meeting those goals, and revise strategies as necessary. As noted earlier, to implement HPSGP successfully, schools have to learn new skills and experiment with different strategies until they find those that work. This all takes time. No one person among those whom we interviewed thought that three years was enough time to develop those skills, much less be successful in applying them.

Another problematic dimension to the HPSG program, one that was raised by a number of interviewees, concerns the lack of oversight and accountability for program expenditures. As long as schools are meeting their API growth targets, the state assumes that all is well. But even when they do not meet their growth targets and a SAIT is assigned to the school, there is no review of how HP monies were used. In one school, computers that were purchased with HP funds disappeared; while in others, no one really knew how much money the school had, how it had been spent, or what the money was used for in the current year. Lack of budget records is particularly evident in schools that had administrative turnover. Some schools simply did not have the budgets for the HPSG program for prior years. Others show expenditures that had been charged

against HPSGP funds, but no budget to show how those monies had been allocated or how fit into an overall program of school improvement.

POLICY IMPLICATIONS

Based on the schools in our study, participation in the HPSGP has produced somewhat mixed results. While some schools were able to benefit from the program and regarded it as an opportunity to transform the school into an effective organization competent to serve the educational needs of its students, others regarded the program as a financial windfall and a source of discretionary funding. The difference between the two was in the commitment that teachers and administrators in the school made to school improvement. The purpose of this chapter has been to develop some understanding of the implementation of the HPSGP and to identify various factors that facilitate school improvement.

One of the features that sorts schools in our study is their motive for participating in the HPSGP. As already noted, some applied for the grant because they saw it as an opportunity for discretionary resources. Some schools did a quick calculation and realized that HPGSP funds could bring in as much as $4 or $5 million over three years. Even for the average-sized school, the HPSGP generated about $1.4 million over the course of the program. Some of those interviewed admitted that the HPSGP funds were the only source of "new" money available to schools, and they applied precisely for that reason. For these schools, program participation was opportunistic. They tended to be the schools that exercised little accountability over HPSGP funds, shelved the action plan after it was written, and used funds as spending needs arose. At the other end of the continuum were those schools that viewed HPSGP funds as an integral part of their vision for school improvement.

In the short term, if state policymakers continue funding future cohorts of Decile 1 schools through the HPSGP, there are several modifications that they may want to consider. Over the long run, however, improving low-performing schools may require rethinking the funding and governance structure of K–12 education in California.

Oversight and Accountability

Nearly all individuals we interviewed argued for greater external oversight and accountability for schools' and districts' use of HPSGP funds. While the funds are intended to flow to schools, some schools complained that their district controlled the funds. However, at the school level there was little accountability for how schools spent funds once they received them. Schools that were committed to a reform agenda used the funds as they proposed in their school action plans. They reviewed the action plans at least annually to see what modifications were needed. In those schools, program expenditures were guided by an improvement plan. The school site council was not an effective means to exercise oversight. Often the school site councils themselves had little or no knowledge of the HPSGP other than it providing a resource stream to the school.

Duration of Program Funding

Three years is not sufficient time for most schools, especially Decile 1 schools, to develop the skills and capacity to successfully implement the HPSGP. Some of those interviewed suggested that the $1,200 per pupil that schools received over three years should be spread over a five- or seven-year period. As noted earlier, some schools needed three years just to develop the organizational skills to learn how to conduct needs assessments,

identify student learning needs, determine which resources would be most affective in addressing those learning needs, establish goals and objectives for the use of those resources, measure progress to meet those goals, and make the necessary changes, as needed, if goals were not met. Faculty and staff in most schools simply lack the skills to engage in these activities with predictable rates of success. As Stanford professor and noted organizational studies expert James March has observed, most schools lack the organizational intelligence to undertake those tasks. This does not mean that they cannot develop the necessary intelligence. But, as March would argue, organizations need time to learn.[13]

The current policy of funding Decile 1 schools for three years assumes that whatever problems these schools face, those problems will go away after three years. However, as long as Decile 1 schools continue to serve predominantly poor, non-English speaking students, half of whose parents do not possess a high school education, the problem will persist. In many of these schools, HPSGP funds are used to purchase supplemental services like tutoring, time for collaboration and planning, teacher support, and the like. These are ongoing needs that persist beyond the three years of funding that schools are given.

Redefine the Problem

The recommendations in this chapter can produce marginal changes in the implementation and overall effectiveness of the HPSGP as a state strategy for improving low-performing schools. However, the major impediments to change among Decile 1 schools remain factors that are not readily amenable to policy manipulation. Policy cannot compel commitment, cannot mandate organizational stability and continuity, and cannot enforce program coherence. Years of policy efforts to reform schools have shown that many of the important components of organizational culture lie beyond the reach of standard policy instruments. For this reason, policymakers need to rethink their current approach to fixing low-performing schools.

One recommendation is to shift attention from Decile 1 or low-performing schools to schools that serve student populations that *mirror* those of Decile 1 schools—those with a high percentage of low-SES students. This group of schools encompasses a unique set of policy problems: they face greater challenges and need more assistance than the average school. In addition to their need for financial and human resources, they need focused technical assistance and mentorship.

The demographics of Decile 1 schools are markedly different from the average school in the state. These differences will not go away after three years. Consequently, the state's solution to improving low-performing schools needs to go beyond fixing the HPSGP program to tackling how schools like those in Decile 1 should be funded and supported. The main policy question that needs to be addressed is not how to fix low-performing schools, but what state policy can do for schools that serve large numbers of educationally and economically disadvantaged students. It is a more complex and politically difficult problem than simply making adjustments around the edges of the current program. Its solution touches upon the structure of the system of school finance and the system of governance.

ENDNOTES

[1] The scale is from 200 to 1000.

[2] The actual number of students is understated. While 94% of students in Decile 1–3 schools were tested, in some schools, mostly high schools, just over 50% of students were tested. The percent of students eligible for free lunch is probably also understated since some students, mostly in high schools, either don't eat in the school cafeteria or don't admit that they are eligible.

[3] The HPSGP study is supported by a grant from the Bill and Melinda Gates Foundation. The study is being conducted in collaboration with American Institutes for Research, who have contracted with the California Department of Education to conduct a study of the HPSGP. The Gates supported study has a much narrower focus than the AIR study in that it is concerned primarily with how schools used HPSGP funds. The collaboration benefits greatly from AIR's generously sharing interview protocols, study findings, and assistance in arranging for the school site visits. I am especially indebted to Jennifer Harr, Tom Parrish, and Paul Gubbins for their assistance and support.

[4] Yudof, Kirp, Levin, & Moran, page. 699.

[5] ibid.

[6] Wirt & Kirst (2001).

[7] Kirp (1986), page 3.

[8] Principals are required to participate in AB 75, Principals Training Program, and teachers in AB 466 mathematics and reading/language arts professional development program. The focus of both programs is to align instruction with state standards and assessments.

[9] Chapter 749, *Statutes of 2001.*

[10] Scott (1992).

[11] March differentiates, for instance, between organizational "exploitation" and organizational "exploration." Exploitation essentially means doing what you have been doing, particularly if you are doing it successfully. Exploration, on the other hand, means finding new directions and new ways of doing things in order to be successful. See March, op. cit.

[12] American Institutes for Research has contracted with the California Department of Education to conduct the state-wide assessment of thee HPSGP. The case studies of schools' implementation of HPSGP were conducted in collaboration with this study, funded by the William and Melinda Gates Foundation. This chapter is part of a larger study for the Gates Foundation.

[13] March (1999).

REFERENCES

Kirp, D. (1986). Introduction: The fourth R: Reading, writing, 'rithmetic—and rules, in D. Kirp, & D. Jensen (Eds.), *School days, rule days* (p. 3). Philadelphia, PA: Falmer Press.

March, J. G. (1999). *The pursuit of organizational intelligence.* Malden, MA: Blackwell Business.

Scott, W. R., (1992). *Organizations: Rational, natural, and open systems* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

Wirt, F., & Kirst, M. (2001). *The political dynamics of American education.* Richmond, CA: McCutchan Publishing.

Yudof, M., Kirp, D., Levin, B., & Moran, R. (1992). *Educational policy and the law.* Belmont, CA: Wadsworth Group/Thompson Learning.

CHAPTER 6

Achievement and Attainment: The Comprehensive High School and the Problem of Reform

Leslie Santee Siskin
New York University

HIGH SCHOOLS HAVE DOMINATED THE NEWS ON EDUCATIONAL REFORM LATELY, IN A STEADY BOMBARDMENT OF BAD NEWS, "DISTRESSING NEWS" (ED TRUST, 2006), AND EVEN "SCARY" NEWS (DETROIT NEWS, 2006) OF HIGH DROPOUT RATES AND LOW TEST SCORES AND TOO MANY STUDENTS LEFT BEHIND.

Improving high schools is an "urgent challenge," declared Secretary of Education Margaret Spellings, speaking at a 2005 National Summit on High Schools, "one of the biggest challenges our country faces." The U.S. is, Time magazine told us on its cover, a "dropout nation" (April 17, 2006), and high schools, according to the L.A. Times, are a "dropout industry" (January, 2006). Oprah Winfrey (2006) ran a highly publicized series on "American Schools in Crisis," showcasing failing high schools and an "epidemic of dropouts."

The statistics from different reports convey the same conclusion, in a remarkably consistent message of alarm:

- 1.2 million students each year fail to graduate; 7,000 students drop out every school day (Alliance for Excellent Education, 2006);
- Of every 100 students who begin ninth grade, only 68 will graduate, and only 18 will actually earn a college degree (Achieve, 2006);
- 3 of 10 ninth graders do not graduate within four years; 4 of 10 African-American and 5 of 10 Hispanic students (Gates Foundation, 2006).

Even when students do survive the "epidemic," research reports provide more bad news: more than half are unprepared to compete in the new global economy (Murnane & Levy, 1996; Education Trust-West, 2004; Gates, 2006), and unready for college (Achieve, 2006; Quint, 2006; Roderick, 2006). Test scores are low, and show little sign of improvement: even the few scattered claims of success were explained away as residue of elementary school reforms (Haycock & Huang, 2001) or called into question, as in the "myth of the Texas miracle" (Haney, 2000; Klein, Hamilton, McCaffrey & Stecher, 2000) or the "legend of the large MCAS gains" in Massachusetts (Camilli & Vargas, 2006).

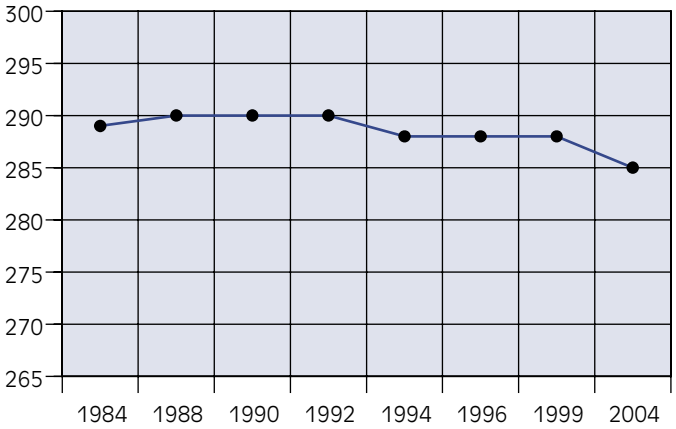
No wonder, then, that the problem of the high school has become everyone's problem. By 2005, 87% of the public was "extremely or very concerned" about dropouts, and 83% agreed there is "extremely" or "very urgent" need to improve high schools (Alliance for Excellent Education, 2005). Whether echoing the public or shaping their opinion, leaders inside and

outside of government have joined the chorus of concern. From the President's Office to the Governors' Summit to corporate boardrooms, the fate of the high school seems to be on everyone's agenda as an 'urgent challenge.' When it comes to high school, Chester Finn pronounced (2005), "things are falling apart," while Bill Gates proclaimed that the very institution of the high school itself has become "obsolete."

But are things "falling"? Is the "failure" really a matter of high schools getting worse, or of something more complicated—of the context of success itself changing? Much of the "bad" news is not, if we look a bit closer, really new: accumulating evidence below the headlines suggests not that high schools have changed for the worse, but that they have not changed for the better. Far from "falling apart," high schools are, statistically, staying stubbornly the same. While the specific numbers of dropouts are estimates, and always contentious, the overall patterns have held steady for the past thirty years. From state to state, from TIMSS to NAEP, across studies and across tests, test scores, too, remain remarkably flat. The average reading score on the NAEP test, for example, was 285 in 1971; in 2004, after some fluctuation, it was still 285.

Math scores were not much better, rising from 304 in 1973 to only 307 in 2004, thirty-one years later. Despite two decades of massive reform efforts to restructure and resize high schools, despite the introduction of standards and accountability systems that promised radical change, and even despite reported gains at the elementary and middle schools, on almost every measure high schools have stayed strikingly stable (Achieve, 2005; Carnoy, Elmore & Siskin, 2003; Education Week, 2005; National Commission on the High School Senior Year, 2001; McLaughlin & Talbert, 2001).

FIGURE 1: NAEP Flatline in Average Reading Scale Scores for Students Age 17 (1984-2004)



Source: National Center for Education Statistics

If the problem with high schools now is not that they are falling apart, then why are we experiencing their consistent performance as a "crisis"? The problem, it seems, is an inconsistency of a different kind: high schools now are being asked to do something they have never done before, and something they were not designed to do (Siskin, 2003). This is a new demand for high schools: to educate *all* young people through to graduation, and to ensure that they all take rigorous courses and are prepared for college. Moreover, this is not only a new standard, but two standards for success (or indicators of failure) that have traditionally and organizationally been held quite separate. For the first time in the history of the American high school, aspirations for increasing attainment (raising graduation rates) are in direct conflict with expectations for increasing academic achievement (raising test scores).

Cross-Purposes: Aspirations of Attainment/ Expectations of Achievement

> *Just imagine what we could accomplish if we truly educated all young people well. If all students—regardless of their race or income—attended a great high school. A school that challenged them. A school that excited them. A school that made them proud. Imagine if all students had teachers who inspired them to reach beyond their grasp. If they took rigorous classes that opened their minds and their futures. Imagine if all our young people arrived at their high school graduation ready to attend college now and to lead our country in the future.*
>
> —Melinda French Gates, to National Conference of State Legislatures, July 2003

While the patterns of high school achievement and diploma attainment may not be new, what is new is the meaning attached to those figures. What Melinda Gates imagines actually describes an emerging consensus about not only what a 'great' high school should be, but also what every high school should

provide for all students. That consensus combines two different and quite distinct demands: expectations of higher standards from the policy system, and aspirations for higher education for increasing numbers of students. The first is a model of academic *achievement* that focuses on test scores and the changing expectations of rigor in the policy system; the second is a model of *attainment* and expanding access that focuses attention on graduation rates and the changing aspirations of students. These traditionally distinct, and often competing priorities, are brought together as social and economic conditions have changed, producing simultaneous pressure to raise test scores and raise (or at least not reduce) the numbers of graduates.

By the end of the twentieth century economic conditions and the connections between education and employment opportunities were changing, rapidly and dramatically. Fewer jobs were open for employees without a high school diploma, and few of those would provide salaries above the poverty level. In 1950, 60% of American jobs did not require a high school diploma (Achieve, 2006). By 1973, that figure had dropped to 32%; by 2001 it had fallen to only 9% (Carnevale & Desrochers, 2003). Even fast food and factories are increasingly demanding, and choosing among, applicants with diplomas. Whether these changes actually signal 'a nation at risk' or not, there is little question that students increasingly are at risk of being left behind if they cannot complete high school and leave with a diploma in hand.

Students have clearly gotten the *attainment* message, and their aspirations are also changing rapidly and dramatically. "Ask any high school student in Chicago today what he wants out of high school and the answer is almost without fail, 'to graduate and go to college'" (Roderick, 2006). High school students across the country respond the same way: in the National Survey of High School Student Engagement (2004) 90% plan to attend college (Achieve, 2005); in another, 94% do (Alger Association, 2006). Those numbers are widespread, remarkably high and rapidly rising: nationally, the percentage of tenth graders aspiring to college doubled between 1980 (40%) and 2002 (80%) (Roderick, 2006). Between 2004 and 2006 the college plans of African American students rose from 78% to 84%; for Hispanic students from 66% to 73%. In steadily increasing numbers, the vast majority of students enter ninth grade aspiring not only to go *to* high school, but *through* it to receive a diploma and access to college and a productive career.

The policy system has changed its expectations of high schools too, but there the most dramatic change has been to focus on *achievement*—on raising academic performance and improving test scores through building systems of standards-based accountability. By 2001, 49 states had adopted new accountability systems, new standards, and new tests with sanctions for schools whose scores did not rise; by 2005, 24 states, including California, had moved to make high school diplomas dependent on test scores (though several had delayed deadlines for that to take effect). Here, the policy pressure has been to ensure that no child gets through high school or receives a diploma without meeting the new standards.

The potential conflict between these two different demands becomes apparent as educators confront what a New York teacher called "a lost generation"—students in a new kind of limbo who did not drop out, but cannot get a diploma because they have not passed an exit exam (Siskin, 2003c). A high school student in California expressed her frustration when facing just that situation: "I need a diploma. I want it. I deserve it. I've been going to school and studying. I want to have a profession." But despite her successful persistence through school, despite passing all her courses, she was stopped at graduation by her failure to pass one CAHSEE test (Asimov, 2006). In 2006, the first year that diplomas depended on CAHSEE scores, reports estimated that approximately 40,000 students were in just that limbo, left behind to watch their classmates cross the stage at graduation.

The challenge of the 21st century, the 'urgent challenge' confronting the new accountability systems, the high schools, and now the states is how to accomplish both at the same time: to achieve high standards for all students, and—at the same time—to ensure that every student can reach graduation and receive a diploma. To reach that stage, as a high school teacher put it, "a revolution would have to take place" in which "the way we teach and what is taught and how it's taught [all] have to be changed." That revolution requires changes in every aspect of the accountability system and the high school organization. Most fundamentally, it involves challenges of design, of assessment, of curriculum and of teaching.

The Challenge of Design

While both goals have always existed in schools, they have tended to operate at cross purposes, historically alternating as educational reform swung back and forth like a pendulum: on one side, arguments for achievement and excellence; on the other calls for expanding access and attainment (Angus & Mirel, 1999; Tyack, 1967). In times like the last "age of standards", back in the 1890s (Mazzeo, 2001), in the reforms of the academically oriented Committee of Ten, or in the mid-century response to Sputnik, the pendulum has swung toward the 'academic core,' toward preparation of the college-bound, the future leaders, the talented tenth. In times aimed toward increasing access and attainment, whether due to increasing enrollments, waves of immigration, or depressed employment opportunities, the pendulum has swung the other way. Reformers called for broadening programs to focus on "useful knowledge" rather than academic subjects like algebra that "injured the mind, destroyed the health, and wrecked the lives of thousands of children" (Tyack, 1967, p. 359). "Personal English" taught writing letters instead of reading literature; social studies replaced "dry academic subjects" like history with hygiene and "life skills" (Angus & Mirel). The one constant was the assumption that high academic standards were only for the select few (Kliebard, 1987; Ravitch, 2000).

Since the middle of the twentieth century those two compelling forces have been held in delicate balance by the powerful compromise of the comprehensive high school. The Conant Report provided the basic blueprint that could embrace both goals: a single institution that could aim to educate "*all* the youth living in a town, city, or district" (Conant, 1959, p. 9). The design could accommodate the "horde of heterogeneous students that has descended on our secondary schools" by bringing them together "under one roof," but not under one curriculum (p. 602). Educators, Conant argued, would have to develop differentiated expectations: an academic track would "maintain high standards" for those of "high ability," while other courses, in vocational and 'general studies' would have "another standard." To that end, high schools would have to expand in size to sort students efficiently into suitable programs, sift them into appropriate tracks, and supply the array of offerings that could meet their diverse needs. Indeed, the strongest recommendation of the report was that "the number of small high schools must be drastically reduced" and replaced by large comprehensive high schools with "a graduating class of at least one hundred" (p. 14).

Through the end of the twentieth century, the fundamentals of that design—the function of sorting and sifting and the provision of something for everyone and academics for some—remained intact as high schools followed the blueprint far beyond the expectations of its authors. While not all high schools became comprehensive, that quickly became the dominant model—the kind of high schools most students go to, that most test scores come from. They grew in size, far surpassing Conant's suggested goal for "large" to reach an average of 1,200 students, with many enrolling three or even four thousand students. They grew more and more organizationally complex, dividing and subdividing students by grades and tracks, teachers by departments and programs. The curriculum, too, grew far beyond the projected three tracks to seven, or even twelve sharply differentiated levels (Oakes, 1985; Siskin, 2003). Course offerings expanded to a "cafeteria style curriculum in which the appetizers and desserts can easily be mistaken for the main courses" (Nation at Risk, 1983). The comprehensive high school, critics charged, had come to resemble a "shopping mall" where "some shop at Sears, others at Woolworth or Bloomingdale's" but where not every neighborhood would offer a Bloomingdale's (Powell et al. 1985; Siskin, 2003).

Given the changes in time, in the economy, in public aspirations and policy expectations, that fifty-year solution has become the problem for a new generation of reformers—seen as too large, too impersonal to keep students engaged (or even safe), too disconnected to adequately prepare them for college or workplace entry, and too often offering starkly inequitable opportunities both within and across schools. "Training the workforce of tomorrow with the high schools of today is like trying to teach kids about today's computers on a 50 year old mainframe. It's the wrong tool for the times" (Bill Gates, 2005 NGA Summit on High Schools). But while the comprehensive design may be the wrong tool for the new century, the fundamentals of the design remain strong, deeply entrenched in the structures and cultures of high schools, solidly built into the operating systems of assessment, of curriculum, and of teaching.

Challenges of Assessment

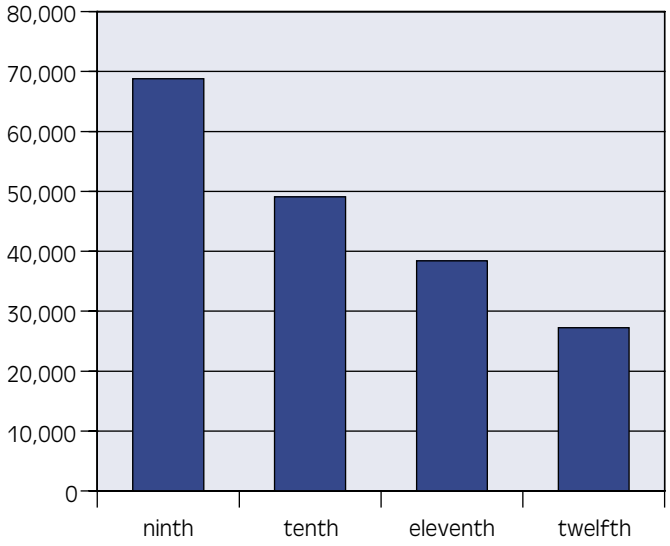
> *"Testing is important. Testing at high school levels will help us to become more competitive as the years go by. Testing in high schools will make sure that our children are employable for the jobs of the 21st century. Testing will allow teachers to improve their classes. Testing will enable schools to track. Testing will make sure that a diploma is not merely a sign of endurance, but the mark of a young person ready to succeed."*
>
> —George W. Bush, January 2006

Testing certainly has been an important strategy in the new accountability systems—the primary tool used to push schools toward academic achievement, measured by test scores. Originally grounded in a powerful logic of 'systemic reform,' states were challenged to establish clear standards for what all students should learn, to provide opportunities for them to do so, and to develop assessments to measure their progress (Smith & O'Day, 1991). Almost every state has adopted testing as a cornerstone of accountability, and the federal system has persistently called for more tests for more students at more grade levels—leading teachers to joke that the new policy should be called No Child Left Untested. But testing is at best an imperfect tool for measuring student learning, and a weak lever for effecting change in instructional practice. Those weaknesses have been particularly prominent, and problematic, in the effort to use testing to bring about major change in the high school. High school teachers make a sharp distinction between the idea of high standards, which they see as necessary, and the instruments of high stakes testing, which they see as inadequate, inaccurate, and inevitably tied to rising failure rates and increasing numbers of dropouts.

One challenge has been the difficulty of aligning the strategy of testing with the structure of the high school. The comprehensive design, with its large size, compartmentalized subjects and departmentalized faculty makes even delivering information to teachers difficult. Designing a testing system that would allow them to improve their classes seems a daunting challenge at best. At the elementary level the logic is clear: a 4th grade math test, for example, should assess all 4th grade students on 4th grade standards. Each 4th grade teacher can adopt curriculum and adapt teaching strategies to align with the 4th grade standards that will be assessed (though whether they should or not is a different question). At the high school level, however, that logic breaks down. A 'high school' math test may assess 10th graders, 11th and 12th graders, or advanced 9th graders on a range of math topics from basic arithmetic through algebra to trigonometry. Students in different tracks will have taken algebra at different times, and from different teachers. Most states test math and reading; most high school teachers teach neither subject (and in many high schools, no one teaches reading). For teachers committed to the ideals of a comprehensive education that meets multiple purposes through multiple subjects, such tests are simply inadequate to assess what they should be teaching, and what students should be learning.

A second challenge is that of accuracy. Even testing that tiny fraction of what is taught in high schools adds to the pressure on a testing industry struggling to keep up with increasing demand. There were 45 million tests in 2006, forty-nine different sets of state standards, dozens of different tests for different grade levels and subjects, and only 5 major companies to manage the task. NCLB legislation requires the use of "high-quality academic assessments" aligned with state standards, but thus far, the industry has had difficulty meeting standards of even basic accuracy (Rhoades & Madaus 2003; Toch, 2005; Viadero, 2006). Widespread reports of mistakes in test items, missing supplies, misplaced answer sheets, and mistakes in scoring have been common across states, and across companies: Harcourt mistakenly "failed" 736 students in Nevada, 355 in Connecticut; Pearson mis-scored 8000 tests in Minnesota, 2500 in Alabama. Even ETS, with decades of experience in large-scale administration of high-stakes tests, reported mis-scoring five thousand tests—and then misplacing a thousand more. In Long Beach, the courier lost answer sheets for 400 sophomores—the first year that the CAHSEE scores would be used to determine graduation. At the high school level—where stakes are so high, where diplomas or college admission can depend on a single number, such problems with inaccurate assessment are particularly troubling. For teachers, they undermine the credibility of the accountability system, and of reformers (Siskin, 2003a).

FIGURE 2: Declining High School Enrollment, Los Angeles County District



Source: Los Angeles County District Public Schools, 2002

Many educators, critics, and researchers are left with questions about whether high stakes tests are driving students to drop out (Carnoy et al. 2003; Haney, 2000). But no one knows for sure, because no one has been accountable for keeping accurate count. *What happened to the class of 2005*? asked a provocative headline in the L.A.Times, leading into its story of how a class on 1100 entering ninth graders had somehow dwindled to only 521 seniors four years later (Landsberg, 2006). As the pressure of high-stakes tests, and the looming possibility of high rates of failure in many schools rises, the question is increasingly being asked. But instead of displacing the pressure toward achievement, as in earlier reform waves, concerns about attainment and graduation rates are arising alongside them, catching high schools (and policymakers) in the vise of dual expectations. Indeed, given the delays of deadlines for when diplomas depend on test scores, the full force of the achievement effort has yet to hit most states, or most high schools.

An accurate count of students as they enter, progress through, and exit schools should be a basic cornerstone in building any accountability system, and an essential component of high school reform. Instead, policymakers and educators rely on estimates from different studies that start from different kinds of data and use different methods of calculation—producing dramatically different—and politically contentious— results. In 2003, for example, the state of California reported an 87% graduation rate; federal figures put the figure at 74.1%; a Manhattan Institute study estimated a rate of only 70%. District figures, as well, can vary considerably depending on who is counting and toward what end, but dramatic declines in the numbers of students progressing from grade to grade suggest many more students are disappearing from the rolls than are appearing in dropout counts.

NCLB has recently added a measure of four-year graduation rate to its accountability system, making it imperative for states, districts, and schools to keep more accurate track of students. All fifty governors have now signed the Graduation Rate Compact, pledging to develop a consistent and comprehensive system of tracking students. California has begun to develop its Longitudinal Pupil Achievement Data System, with voluntary participation of districts expanding to include data state-wide, but those systems are still many years and millions of dollars away from providing data that are useful to schools.

Challenges of Curriculum

> *"Maybe if they spent all day doing only English and writing and didn't do any math or science. But they have other things"*
>
> —Teacher

Keeping track of students and keeping them in school is one critical component of high school reform that data systems can help to address; keeping them on track academically to meet testing demands and college requirements involves challenges of curriculum capacity and development. Accountability reform is generally framed as a shift from inputs to outcomes, from counting seat time to rewarding achievement, but for comprehensive high schools that have long measured their success by how many 'other things' they offered, the shift to a more narrowly academic focus is profound. The dilemma of how much time they should spend focused on tested subjects that prepare them for achievement ends, and how much on the 'other things' that engage their interests and keep them attending school has been challenging for many schools.

Many schools, particularly high-needs high schools, simply lack the capacity to provide sufficient academic courses for their students. In recent studies of national curricular pathways, 94% of students

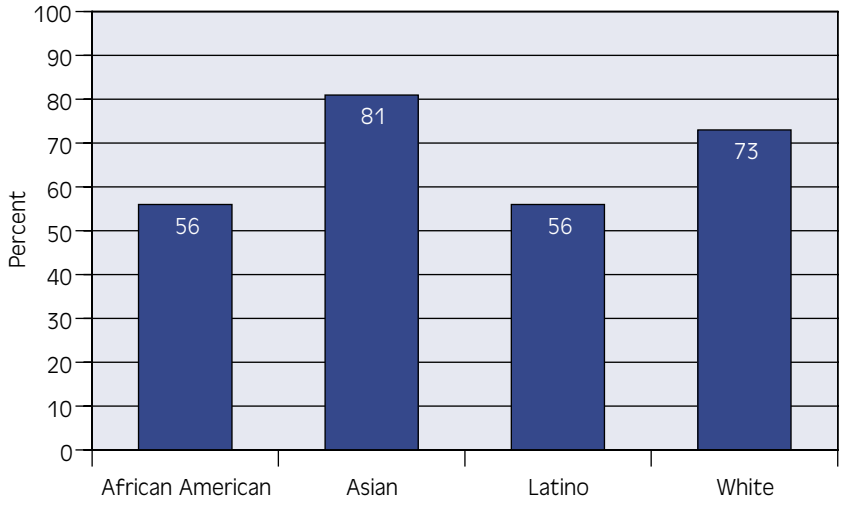
say they plan on going to college, but only 49% are enrolled in the college prep or AP courses that would take them there (Alger Assoc, 2006). This is not because students are unmotivated: 74% of minority girls report wanting to take advanced math, but only 45% have access to such classes in their schools (Achieve, 2006). Education Trust-West has developed a "Curriculum Opportunity Index" to assess California's capacity to provide the "A-G" courses required for college: of the 371 high schools they selected, fewer than 20% of could offer the full sequence to all their students. In 19 schools, fewer than half of the students could have that opportunity (www.edtrustwest.org).

States and schools are working to increase academic offerings and raise academic achievement. In the new American Diploma Project, 22 states have now pledged to align "curriculum, standards, assessment and accountability policies with demands of college and work" (Achieve, 2006). In 1992, only six states required three science courses to graduate; by 2011, 27 will. Schools and districts, too, are moving to 'raise the bar,' narrowing the 'shopping mall' curriculum as prescribed, at least on paper (though there is certainly evidence in some cases of nominal compliance—where titles have changed but what is taught, and how it is taught, remain largely untouched) (Loveless, 1999; Siskin, 2003b). Overall, however, there does seem to be a general effort to shift "from warehousing and managing student behavior to focusing on serious student learning" (Hess & Cytyrnbaum, 2001). There are more algebra classes, and fewer offerings like "Pre-Spanish, Teen Living, Food Fundamentals, and Winter Activities" that are now being phased out in California high schools (Education Trust, 2005). In San Jose, district officials report remarkable success following their decision to make the A-G sequence the default curriculum for all students (Murray, 2005). AP courses, too, are being offered at a rapidly increasing rate, rising nationally from 1,220 tests in 104 schools in 1,956 to more than 2 million tests in 2004, taken by one million students in 11,000 public schools (College Board, 2005). California, too, reflects that shift, with the number of 11th and 12th graders taking exams up from 10% in 1997 to 15% in 2004. Those numbers are slightly above the national average (12%) but somewhat unevenly distributed—30% of Asian students took AP exams that year; only 6% of African American students did.

One unanticipated consequence of that shift is that many schools, particularly those schools most under achievement score pressure, are not only raising the floor of course offerings but lowering the ceiling. Here students are not only losing courses like cooking with chemistry but also 'other things' like marine biology and music, or what have been identified as 21st century skills" like global awareness, critical thinking and problem solving (Siskin, 2003b). Moreover, students who come in to high school with low achievement scores can lose the most—like those in a Texas high school who found themselves placed in math, remedial math, and test prep math (Carnoy et al. 2003). Such schedules leave no time for the electives that college admission committees seek and employers demand, and it is hard to imagine a less enticing schedule to keep anyone in school.

On the other hand, many large low-performing high schools and new small schools have redesigned structures and curriculum in ways that show considerable power in retaining students, in keeping them engaged in learning, in maintaining their aspirations toward college, in raising graduation rates and college

FIGURE 3: California Graduation Rates, Estimates for Class of 2003

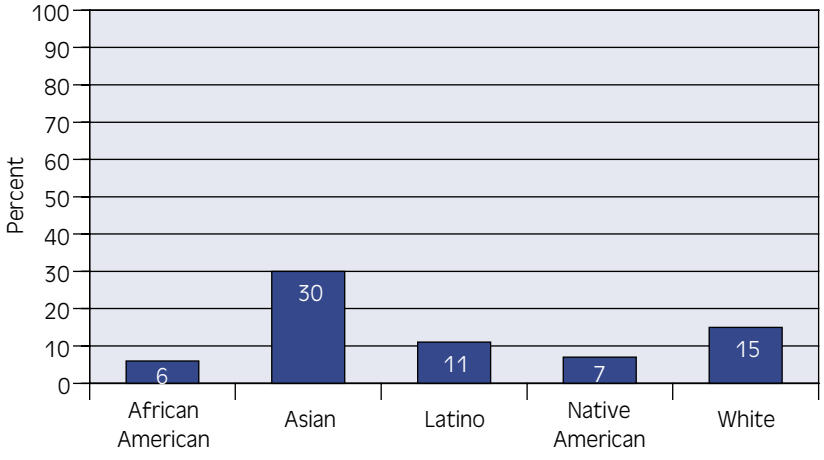


Source: Manhattan Institute (2006)

admissions. But those changes in structure have not ensured changes in instruction, and do not necessarily raise academic achievement—at least achievement measured by test scores—as many of the Gates-funded small schools have learned (Kahne et al., 2006; Carnoy et al., 2003).

The one area where accountability pressures are expanding rather than constricting curriculum in the high schools is in reading—the subject most commonly tested and yet least commonly taught in high schools. Researchers estimate the number of adolescents who struggle with reading at approximately 6 million (Joftus, 2002); on NAEP tests, 64% of high school students performed below proficient and more than 25% below basic. As the dual demands of the new accountability require schools to keep these students from dropping out, and to prepare them to pass high stakes tests, literacy is probably the most pressing and unmet need in high school curriculum. But there are few specialists, and few programs with successful strategies for *adolescent* literacy—and fewer still that can make the necessary connection to *academic* literacy—the skills required to read high school science or engage history texts (with the Strategic Literacy Initiative in California providing an important and promising exception) (Schoenbach et al., 2000). But without that connection, teaching reading will remain what it has been: at best, the job of an isolated specialist with marginalized students, at worst, no one's job.

FIGURE 4: AP Exam Participation in California



Source: American Diploma Project, 2005

Challenges of Teaching: Distribution and Development

> *"But just because you demand that I fly a plane doesn't mean that I'm going to be able to do it. So just to ask for something, is not a guarantee that you're going to get better performance out of the person. You might get a nervous breakdown."*
>
> —High School teacher, New York

The conflicting demands of achievement and aspiration cannot be resolved by curricular change—of whatever kind—alone. Simply placing all students on the academic track, as in Los Angeles' recent requirement that all students take algebra, just "triggers dropouts more than any single subject," concluded the superintendent. "I think it is a cumulative failure of our ability to teach math adequately in the public school system" (LA Times, January, 2006). However, even as demands for performance have been escalating, investments in teaching have lagged far behind the imposition of testing and sanctions. That leaves many teachers feeling helpless, asked to do something they do not know how to do, and have never seen done—something many have a hard time believing can be done at all. But under the new accountability requirements, they now have to fly the plane.

To guarantee that they can, or even to make it more likely, involves challenges in the distribution of qualified teachers, and in their ongoing professional development. Across the country, high schools, particularly high-needs high schools, are struggling to recruit and retain the 'highly qualified' teachers that the federal accountability system now requires for all students. While there is much debate over the precise definition of 'highly qualified,' a recent special report by Education Trust-West (2006) found an "inequitable distribution of teachers in California by every measurable proxy—including experience, education level, credential status, and salary." They further found that those inequities were systematically distributed: the odds of being taught

by 'highly qualified' teachers were lowest in high-poverty and high-minority schools, and in high schools. Other studies consistently find the same patterns: 44 percent of math classes in California's high-poverty high schools are taught by teachers not certified in math (Ingersoll & Education Trust-West, 2005); students in high minority schools are five times more likely to have an under-prepared teacher (Esch et al, 2004; see also Yun & Moreno, 2006; Rumberger & Gandara, 2004). Moreover, those inequities in teacher qualifications are directly linked to performance on the CAHSEE: in schools with the lowest passing rates, students are three times more likely to have an under-prepared teacher (Center for the Future of Teaching and Learning, 2005).

Developing structures and incentives to bring qualified teachers into schools is just a first step. The next is to provide ongoing and substantive professional development to the teachers who are already there. Strong professional development communities (in high schools typically strong departments) can contribute not only to the learning of teachers, but also to the achievement of their students—including their test score performance (Little, 2002; McLaughlin & Talbert, 2006; Siskin & Little, 1995). Learning to teach all students to reach high standards is neither obvious nor easy; in fact, it runs counter to what many teachers were themselves taught about academic achievement and bell curves, which is why even experienced and certified teachers can worry that they will not be able to deliver what is being asked of them—that the new demands might just produce a "nervous breakdown" instead. To counter that fear, reform advocates urge that "every high school [become] a learning community for teachers" (NASSP, 1996, p. 63), that "teachers must be given more time to collaborate with one another to improve teaching and learning." (National Governors Association, 2005, p. 10).

That means time to meet together and collaborate with subject matter colleagues, for when high school teachers talk productively about instruction, they speak the language of their subjects. Yet while most teachers are in school, they have little time for reflection on teaching, analysis of student learning, or collaborative conversation about just how they will go about getting all students to reach high standards (Siskin, 2003b):

- only 1 in 5 teachers say they "regularly meet to share ideas about lesson plans and methods of instruction" (Public Agenda, 2002)
- only 30% of teachers participated in professional development that involved in-depth study in a their content area,
- less than half report having a mentor to turn to in their subject area (NCES, 2000)

This, like the distribution challenge, is particularly important in the low-performing high schools that are the primary target of the accountability movement, where many students are 4, 5, or even 9 years behind to start with, and where the demands seem particularly difficult to meet. As a Washington DC principal in just such a school explained: "We have a faculty that is somewhat needy on strategies on how to reach these students." When teachers are asked to reach all students, to keep them engaged in school for four years, and to ensure that they are prepared to pass a high-stakes tests, every teacher becomes somewhat needy.

The Problem of Reform

To meet the needs of those teachers and their students, high school reform itself needs to come to grips with its historically dual nature: the two long-conflicting demands of high achievement and inclusive attainment. Left unresolved, those demands have left high schools stubbornly the same. Accountability has asked them to meet both of these demands at the same time. But the structure of the high school—the ways that its fundamental function of sorting and sifting is built into every aspect of its form—stands in the way. The problem of reform, then, the urgent challenge, is to address all of those aspects—aspects of design, assessment, curriculum, and teaching—together.

REFERENCES

Achieve, Inc. and the National Governors Association. (2005). *An action agenda for improving America's high schools.* Washington, D.C.: National Governors Association Center for Best Practices.

Asimov, N. (2006). *San Francisco Chronicle* Jan 7. http://sfgate.com/cgi-bin/article.cgi?file=/c/a/2006/01/07/MNGCRGJVOD1.DTL

Camili, G., & Vargas, S. (2006). *The legend of the large MCAS gains of 2000-2001*. Education Policy Analysis Archives 14(4). http://epaa.asu/epaa/v14n4/.

Carnoy, M., Elmore, R., & Siskin, L. S. (2003). *The new accountability: High schools and high-stakes testing*. New York: Routledge.

Carnevale, A., & Desrochers, D. (2003). *Standards for what?: The economic roots of K-16 reform*. Princeton, NJ: Educational Testing Service.

Center for the Future of Teaching and Learning. (2005). *The status of the teaching profession, 2005*. Santa Cruz, CA: Author.

Conant, J. B. (1959). *The American high school today: A first report to interested citizens*. New York: McGraw Hill.

Education Trust-West. (2004). *Are California high schools ready for the 21st century*? Oakland, CA.: Author.

Education Trust-West. (2006). *Too little thought, too little action: California's teacher equity plan falls short.* Oakland, CA: Author.

Education Week.(2005). *Quality Counts,* 24 (17).

Esch, C.E, Change-Ross, C.M., Tiffany-Morales, J., & Shields, P.M. (2004). *California's teaching force 2004: Key issues and trends*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.

Finn, C.E. (2005). Things are falling apart. *Education Next*. Palo Alto, CA: Hoover Institution. www.educationnext.org/20061/27.html.

Haney, W. (2000). The myth of the Texas miracle in education. *Educational Evaluation and Policy Analysis Archives.* [http://epaa.asu.edu/epaa/v8n41/ [8, 41].

Haycock, K., & Huang, S. (2001). Are today's high school graduates ready? *Thinking K-16: Publication of the Education Trust*, 5(1), 3-17.

Hess, A., & Cytrynbaum, S. (2002). The effort to redesign Chicago high schools: Effects on schools and achievement. In V. Lee (Ed.), *Research on high school reform efforts in Chicago*. Chicago: Consortium on Chicago School Research.

Ingersoll, R. M. (2005). Analysis for *California's hidden teacher spending gap: How state and district budgeting practices shortchange poor and minority students and their schools.*" Oakland, CA : Education Trust-West.

Kahne, J., Sporte, S., & de la Torre, M. (2006) *Small high schools on a larger scale: The first three years of the Chicago High School Redesign Initiative*. Chicago: Consortium on Chicago School Research at the University of Chicago.

Klein, S.P., Hamilton, L.S., McCaffrey, D., & Stecher, B. (2000). What do test scores in Texas tell us? *Education Policy Analysis Archives*, 8(49), 14. http://epaa.asu.edu/epaa/v8n49

Landsberg, M. (2006, January 29). Back to basics: Why does high school fail so many? *Los Angeles Times*.

Little, J.W. (2002). Locating learning in teachers' communities of practice: Opening up problems of analysis in records of everyday practice. *Teaching and Teacher Education*, 18, 917-946.

Little, J.W., & Dorph, R. (1998). *Lessons about Comprehensive School Reform: California's School Restructuring Demonstration Program.* Berkeley, CA: SB 1274 School Restructuring Study.

Loveless, T. (1999). *The tracking wars: State reform meets school policy*. Washington, D.C.: Brookings.

Mazzeo, C. (2001). Frameworks of state: Assessment policy in historical perspective. *Teachers College Record,* 103(3), 367-397.

McLaughlin M., & Talbert, J. (2001). *Professional communities and the work of high school teaching*. Chicago: University of Chicago Press.

Murnane, R., & Levy, F. (1996). *Teaching the new basic skills*. New York: The Free Press.

Murray, L. (2005). *Graduating college-ready, work-ready students*. The Education Trust-West, Superintendent in residence report. www.EdTrustWest.org

National Association of Secondary School Principals. (1996). *Breaking ranks: Changing an American institution*. Reston, VA: Author.

National Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational reform*. Washington, DC: Author.

National Commission on Teaching and America's Future. (2005). *What matters most: Teaching for America's future.* Washington DC: Author.

Oberman, I. with C. Arbeit, C. Praglin, & Goldsteen, S. (2006). *Challenged schools, remarkable results: Three lessons from California's highest achieving high schools*. San Francisco, CA: Springboard Research.

Olson, L. (2001). A quiet crisis: Unprepared for high stakes. *Education Week on the Web*. [http://www.edweek.org/ April 18, 2001].

Presley, J.B., & Gong, Y. (2005). *The demographics and academics of college readiness in Illinois*. Edwardsville IL: Illinois Education Research Council. http://ierc_siue.edu

Rhoades, K., & Madaus, G. (2003). *Errors in standardized tests: A systemic problem*. Boston: National Board on Educational Testing & Public Policy.

Roderick, M. (2006). *Closing the aspirations-achievement gap: Implications for high school reform.* New York: MDRC.

Rumberger, R., & Gandara, P. (2004). Seeking equity in the education of California's English learners. *Teachers College Record,* 106(10), 2032-2056.

Schoenbach, R., Greenleaf, CL., Christine C., & Hurwitz, L. (2000*). Reading for understanding: A guide to improving reading in middle and high school classrooms*. San Francisco: Jossey-Bass.

Siskin, L.S. (1994). *Realms of knowledge: Academic departments in secondary schools*. London and New York: The Falmer Press.

Siskin, L.S. (2003a). Colleagues and 'Yutzes:' Accountability inside schools. *Voices in Urban Education.* Spring 2003: 24-31.

Siskin, L.S. (2003b). Outside the core: Accountability in tested and untested subjects. In M. Carnoy, R. Elmore, & L. S. Siskin (Eds.). *The new accountability: High schools and high-stakes testing* (pp. 87-98). New York: Routledge.

Siskin, L.S. (2003c). When an irresistible force meets an immovable object: Core lessons about high schools and accountability. In M. Carnoy, R. Elmore, & L. S. Siskin (Eds.). *The new accountability: High schools and high-stakes testing* (pp.175-194). New York: Routledge.

Siskin, L.S., & Little, J. W. (1995). *The subjects in question: Departmental organization and the high school*. New York: Teachers College Press.

Smith, M., & O'Day, J. (1991). Systemic school reform. In S. H. Fuhrman & B. Malen (Eds.), *The politics of curriculum and testing* (pp. 233-267). New York: Falmer Press.

Yun, J.T., & Moreno, J.F. (2006). College access, K-12 concentrated disadvantage, and the next 25 years of education research. *Educational Researcher*, 35(1), 12-19.

CHAPTER 7

Crucial Issues in Preparing Teachers of English Learners

Julie Maxwell-Jolly and Patricia Gándara
University of California, Davis

CALIFORNIA HAS A HIGHER CONCENTRATION OF ENGLISH LEARNERS THAN ANYWHERE ELSE IN THE U.S. THESE STUDENTS HAVE DIVERSE SOCIAL, ACADEMIC, LINGUISTIC, AND CULTURAL BACKGROUNDS AND A WIDE RANGE OF EDUCATIONAL NEEDS. Every day, in the great majority of California classrooms, teachers are called upon to meet the challenge of helping these students gain the breadth and depth of English language skills they need to learn the academic content that will allow them to succeed in school and beyond. Although improving how we educate California's English language learners is a complex issue, teachers are central to the learning equation. California cannot meet its full potential until its teachers have the knowledge and skills to help these students meet theirs.

Student Demographics

According to the National Center for Education Statistics, in 2002, of the 3.8 million English language learners in U.S. public schools who were receiving EL services,[1] 1.5 million or 39% were in California. The state with the next greatest concentration of EL students was Texas, with about 16%, followed by Florida and New York with approximately 5% each. Nationwide, the number of limited English proficient students has been increasing rapidly—growing from approximately 2.2 to 4.4 million between 1990–2000.[2] This English learner population is becoming more dispersed, and the growth in the number of EL students has increased dramatically in some of the states that have historically enrolled few such students. Nonetheless, the five states with the largest EL populations—California, Texas, New York, Florida, and Illinois—continue to account for the largest increase in numbers and together were responsible for 51% of the total EL growth between 1990 and 2000 (Cortez, 2003).

California made up the lion's share of the increase, gaining approximately 600,000 EL students during that time period.[3] Over the last two decades, English learners in California public schools increased four-fold and currently represent 1.6 million of the state's nearly 6 million students. Given the youthfulness of this population, these students will be in California schools for a long time. The majority of English learners (69%) are enrolled in kindergarten through grade 6, with 31% enrolled in grades 7–12. Notwithstanding the greater numbers of K–6 English learners, the EL student population is growing most rapidly in secondary schools,[4] where we have paid the least attention to their needs, and where we have the least knowledge and instructional expertise in teaching them.

California has approximately one million additional students who are considered English proficient, but who come from homes where English is not the primary language spoken. The educational implications for these students are seldom discussed or considered. Nonetheless, students who speak a language other than English at home, referred to as "language minority students"[5] account for 43% of California's K–12 school population.[6]

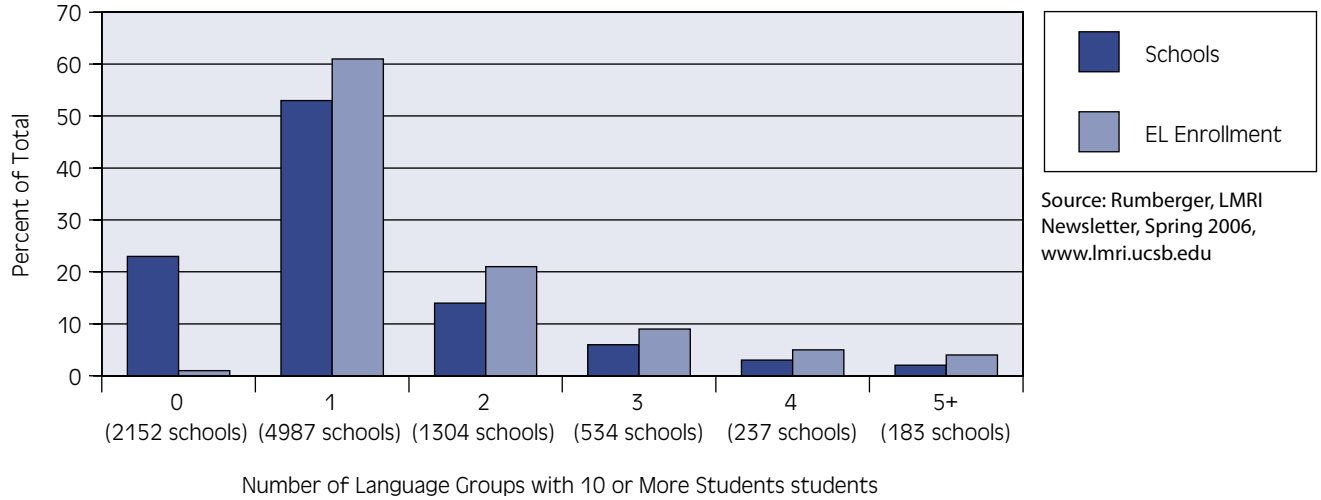
Although California's EL students speak many languages, the overwhelming majority speaks Spanish as a first language. Moreover, Spanish speakers are somewhat more concentrated in California than in the rest of the country. While 71% of all English learners in the U.S. speak Spanish,[7] 85% of EL students in California are Spanish speakers. The next largest group, Vietnamese speakers, makes up only 2.2% of the state's English learners, followed by Hmong, Cantonese, Pilipino (Filipino or Tagalog), and Korean, each with only 1% of the state's EL students. Together these groups account for more than 90% of California's English learners, and no other group in the state exceeds 1% of the EL population.[8] In addition, one quarter of the state's schools have more than 10 students from two or more non-English language groups. While this great linguistic diversity among California's students can complicate instructional strategies, fortunately in a majority of cases (75%) teachers are called upon to address the needs of only one non-English language group (Figure 1).

Academic Achievement of English Learners

Among non-disabled students, English learners are the lowest performing of all students in California public schools. To some extent this is an artifact of testing these students in a language they do not understand. Nonetheless, on all measures we have of student performance, even on largely non-verbal tests, EL students trail their English-speaking peers. This educational discrepancy begins early. Data collected from California students for the national Early Childhood Longitudinal Study shows that students from non-English backgrounds begin school with far less developed cognitive skills than their English-speaking peers (Figure 2).

Moreover, achievement data for older students indicate that the discrepancies persist through the grades. Figure 3 shows the steep decline in the number of EL students who are able to achieve proficiency on the California Standards Test (CST) of English Language Arts (ELA)—a test of the academic English skills necessary for success in all school subjects—as students progress through the grades. At second grade, a somewhat surprising 22% of students who by definition do not speak English with proficiency are nonetheless able to achieve a score of proficient or above (level 4 or 5) on the CST-ELA exam. However, as the demands of the test become greater, students' performance falls precipitously. By 10th grade only 3% of EL students are able to meet the standard of proficiency or above on this exam.

FIGURE 1: Percent of California Schools and EL Enrollment, by Number of Language Groups with Ten or More Students, 2005



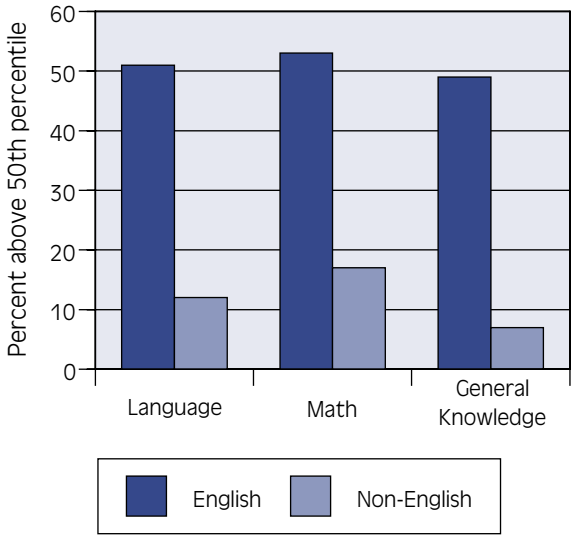
Source: Rumberger, LMRI Newsletter, Spring 2006, www.lmri.ucsb.edu

In striking contrast, 64% of 10th grade EL students scored as early advanced or advanced (level 4 or 5) on the California English Language Development Test (CELDT)—a test designed to evaluate the English skills of English language learners (Figure 4). This large discrepancy, particularly in the secondary grades (Figure 4), between how students achieve on the CST and the CELDT clearly indicates that the latter test is not an adequate measure of the academic English skills that students need to succeed in school. The low level of correlation between students' scores on these two exams should provide a caveat for educators that proficiency on the CELDT is not a reliable indicator of students' ability to master academic work in English.

Even in the area of mathematics, which is generally considered to be less language dependent, English learners do not perform well. EL students' math test scores mirror the pattern seen in language arts: as the complexity of the material increases, students' scores decline (Figure 5).

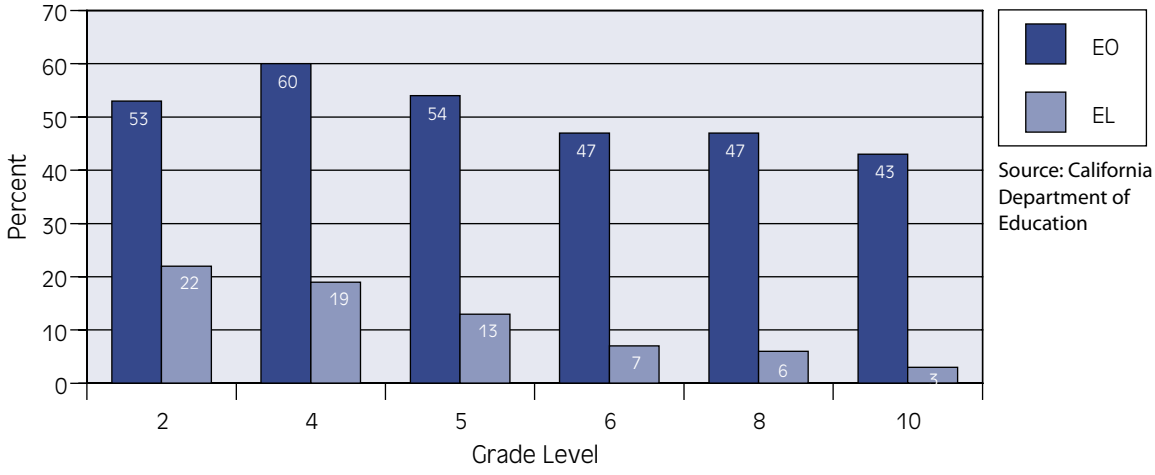
It comes as no surprise, then, that fully half of English learners from the graduating class of 2006 were unable to pass the California High School Exit Exam (CAHSEE) in both English and math by the end of the 11th grade.[9] This was true even for many students who had taken and passed all required courses (Rogers et al., 2005; EdSource, 2006). The already extraordinarily high drop-out rate for English learners (Rumberger, 2004) will almost certainly be exacerbated by this fact. In sum, the low achievement of EL students is reason for grave concern as they come to comprise a larger and larger share of the public school population.

FIGURE 2: Cognitive Skills of California Beginning Kindergartners, by Language Background, Fall 1998



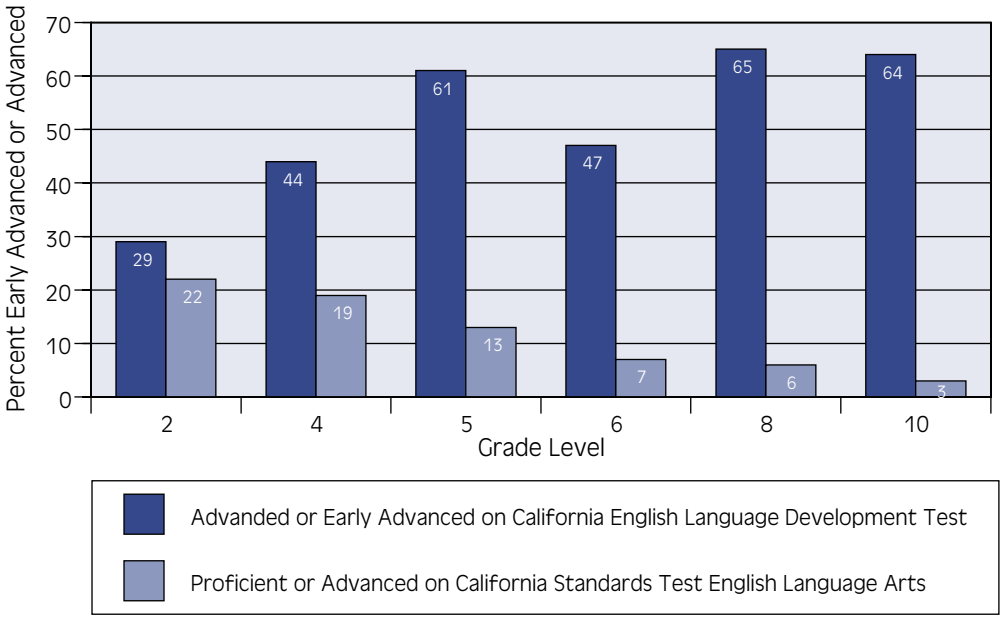
Note: Results are weighted (C1CW0).
Source: ECLS base year data for California public school kindergarteners (N=2826)

FIGURE 3: Percent English Only and English Learner Students Scoring Proficient or Above on California Standards Test, English Language Arts, 2005



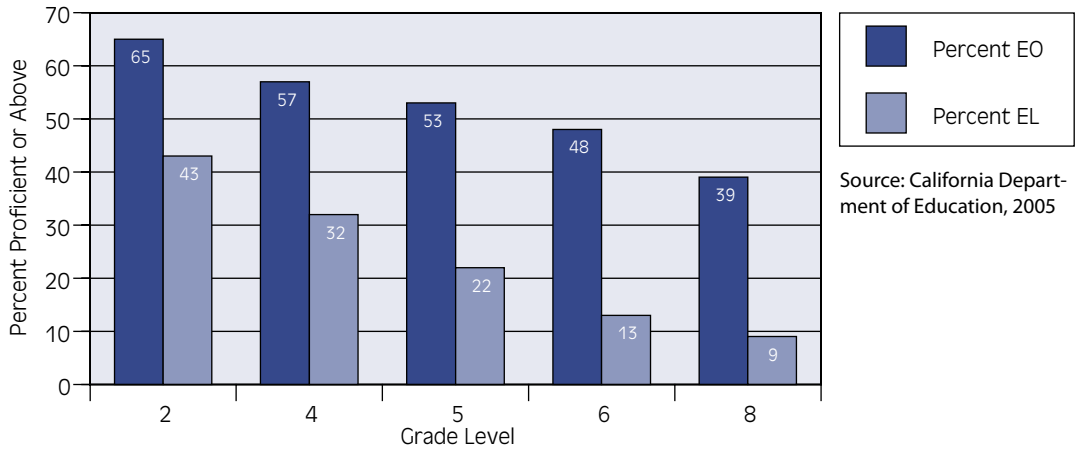
Source: California Department of Education

FIGURE 4: Comparison of English Learners Scoring Level 4 or 5 on CELDT and CST English Language Arts, 2005



Source: California Department of Education

FIGURE 5: Percent of EO and EL Students Scoring Proficient or Above on 2005 CST Math



Source: California Department of Education, 2005

Classroom Programs for English Learners in California Schools

California schools take several educational approaches to teaching EL students. However, no matter what the approach, federal and state law require that EL students receive educational services designed to meet their particular learning needs. The two-fold goal of these services is that EL students receive instruction that 1) teaches them the English language and 2) allows them to understand the classroom curriculum.[10] The principle educational approach to meeting the first goal is through English language development (ELD) instruction, often via content instruction in English as well as through explicit English language lessons designed for English learners. To meet the second goal, teachers can facilitate student understanding of the core academic curriculum using a number of specialized English language teaching strategies (typically referred to as SDAIE or Specially Designed Academic Instruction in English), using the students' primary language, or a combination of these.

The majority of California's English learners receive instruction through ELD, SDAIE, or both (Gándara, 2000; Gándara et al., 1999; American Institutes of Research, 2006) in either mainstream or structured English immersion classrooms. In general, mainstream classrooms include EL students who have intermediate or advanced proficiency in English

together with students who are native English speakers. Structured English immersion (SEI), on the other hand, is intended as a one- or two-year program for EL students who have beginning or early intermediate English language proficiency. SEI classrooms do not include non-EL students.[11] However, many classrooms include students at both levels and incorporate both programs in the same classroom. A very small percentage of the state's students, approximately 8%, are enrolled in bilingual programs, which include content instruction in the students' primary language and/or SDAIE, as well as English language development instruction (Figure 6).

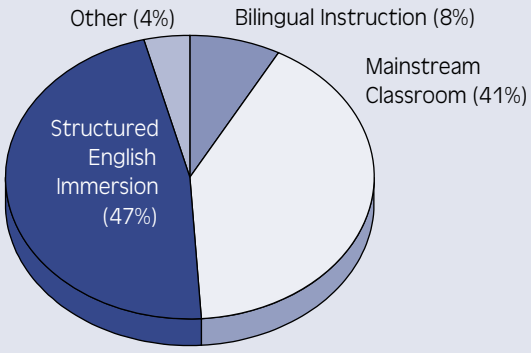
Because of the practice of placing students in the same classroom who are in different programs, and because there is variation among schools with regard to program nomenclature—one school's SEI program might be another's bilingual program—it is much more instructive to consider English learner education from the perspective of the services students receive than the program in which they are placed. English learners need and are entitled to English language development, as well as instruction designed to ensure that they have access to the core academic curriculum (SDAIE), no matter what the name of the program in which they are enrolled. Figure 7 illustrates the education services received by California's English learners.

In our survey of California teachers of English learners, we asked teachers how their EL students receive these educational services (Gándara, Maxwell-Jolly, and Driscoll, 2005). We learned that the EL students of more than half (55%) of the over 5,000 teachers we sampled are removed from their regular classrooms to participate in "pullout" instruction from a resource teacher or paraprofessional for some part of the school day. This is often because the regular classroom teacher is not adequately prepared to provide EL students the instruction they need. The practice was even more prevalent among teachers in smaller districts and those with fewer EL students.

Providing adequate numbers of teachers with the skills they need to work with English learners is a critical part of… improving achievement.

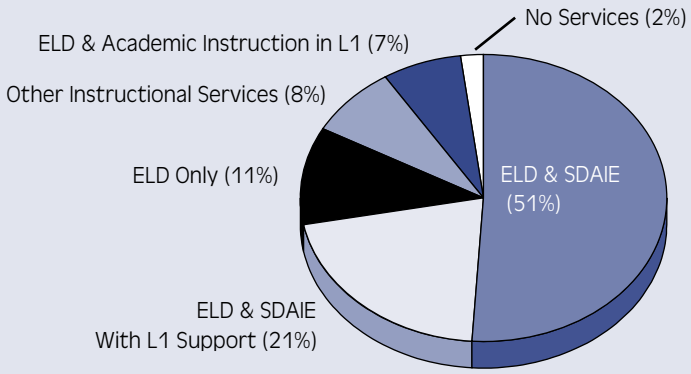
This is of concern because research on pullout instruction places it among the least successful strategies for teaching EL students, and experts in the field do not generally recommend it. Reasons include students' lost opportunities to learn what their classmates are exposed to while they are out of the class, instruction that is inconsistent with that given to students who remain in the classroom, and valuable time lost in transitions (Lucas et al., 1990; Ovando and Collier, 1998).

FIGURE 6: Instructional Programs in which English Learners Receive Educational Services



Source: California Department of Education Language Census, 2005

FIGURE 7: Educational Services Received by English Learners



Source: California Department of Education Language Census, 2005

TABLE 1: Actual and Adjusted Gains, by Teacher Authorization; Grade 2, Selected Schools, LAUSD

	Reading		Language	
	Actual Gains	Adjusted Gains	Actual Gains	Adjusted Gains
BCLAD	1.8 (n=142)	1.6 (n=142)	4.1 (n=148)	2.4 (n=148)
CLAD/LDS	2.0 (n=32)	2.7 (n=32)	1.0 (n=34)	0.4 (n=34)
SB1969	*	*	*	*
A Level@	1.8 (n=155)	1.6 (n=155)	0.3 (n=155)	-1.5 (n=155)
No Authorization	-2.4 (n=74)	-2.9 (n=74)	0.5 (n-93)	-1.8 (n=93)

*Actual and adjusted gains were not reported here due to the small sample size.
@ LAUSD certifies language competencies of its teachers if they do not already hold a BCLAD; A Level indicates fluent bilingual.
Source: Hayes and Salazar (2001), page 36

Teacher Impact on Student Achievement

Providing adequate numbers of teachers with the skills they need to work with English learners is a critical part of the formula for improving the achievement of these students. Although we cannot assign teachers either all the credit or all the blame for student achievement, teachers play a central role in students' education. This is particularly true for youth who are extra vulnerable, such as English learners. Thus our discussion of teacher preparation for English learners warrants mention of the growing research on the critical impact that teachers have on student learning overall. Briefly, this research finds that teachers with good preparation and pedagogical skills (Haycock, 1998; 2001), a rigorous postsecondary education (Ferguson, 1991; Ferguson and Womack, 1993), and full certification in their field (Darling-Hammond and Youngs, 2002; Darling-Hammond, Chung, and Frelow, 2002; Darling-Hammond et al., 2005) make a significant difference in student achievement. Furthermore, these gains in student learning appear to be stable over time. The converse is true as well. It takes students a significant amount of time with good teachers to overcome the effects of one who is ineffective (Sanders and Rivers, 1996; Sanders and Horn, 1995).

The evidence suggests that this is equally true for teachers of English learners. That is, teachers with a greater amount of specialized preparation in working with English learners are more effective in increasing student achievement among these students. As a case in point: a study was conducted in the Los Angeles Unified School District (LAUSD), where 20% of the state's English learners attend school. It investigated the relationship between English learner student achievement gains and the credential held by the teachers who taught them. The study sample included 177 classrooms in 29 schools with large numbers of EL students (Hayes and Salazar, 2001).

Researchers found that "state/district authorization of teachers does have an impact on student outcome. For example, students of teachers holding no state or district authorization achieved largely negative or very small positive...adjusted gains in reading and language" (pp. 37–38; Table 1).[12] A follow-up of 1st through 3rd grade classrooms in the same schools during the subsequent school year again found that "students of credentialed teachers outperformed students of emergency permitted teachers" (Hayes, Salazar, and Vukovic, 2002, p. 90). Unfortunately, research on the distribution of such highly qualified teachers in California indicates that the shortage of these teachers is particularly acute in the schools with the most EL students (Gándara and Rumberger, 2003; Esch et al, 2005).

Teacher Certification for EL Classrooms

English learners require significant expertise beyond that expected of teachers who do not have EL students in their classrooms (Gándara and Maxwell-Jolly, 2000; Gonzalez and Darling-Hammond, 2000; Darling-Hammond et al., 2001). This is true no matter what the classroom instructional program. In an attempt to provide teachers with this expertise, California has developed two supplemental credentials designed specifically for teachers of EL students. The credential most teachers have pursued has been the CLAD (Culture, Language, and Academic Development) credential, which focuses on EL teaching methods. It is granted to teachers who have taken a prescribed course of study, which usually includes a class in cultural diversity, another in first and second language acquisition, and a third in pedagogical strategies for teaching EL students in English.

Teachers may also opt out of any of these requirements by passing an examination demonstrating competency in these areas. Many California teachers actually hold a "CLAD equivalent" authorization (SB 1969)[13] that requires far less preparation than the CLAD credential or certificate.

Less common has been the BCLAD (Bilingual, Culture, Language, and Academic Development) credential, which in addition to the CLAD coursework, includes a class on specific bilingual pedagogical strategies and requires that teachers demonstrate cultural and linguistic competence in a non-English culture and language. The BCLAD can also be earned via examination. Far fewer teachers have pursued this credential—in part because it requires more coursework and competencies.

Many teachers of EL students come from the language groups in which they are certified to teach bilingually. However, most are native English speakers who have acquired their non-English language *outside* the home. One reason for this is that the college-going pipeline of Latinos and some Southeast Asian language groups is exceptionally weak, with many students dropping out of high school and few go on to college (Civil Rights Project, 2005; Lee and Kumashiro, 2005). Additionally, a disproportionate percentage of students from these backgrounds have had difficulty passing the teaching examinations, usually due to issues related to English as a second language (Hill, 1998). Finally, students from these groups who are bilingual and who hold college degrees often have many other attractive job opportunities.

The majority of teachers currently in the workforce has been credentialed under the above conditions. However, this is changing. Beginning in the spring of 2002, the approach to preparing teachers for EL instruction has been to embed the required competencies into the standard teacher credential curriculum. The legislation mandating this approach, AB 1059 (Ducheny, 1998), laudably aimed to ensure that every California teacher has some knowledge of teaching EL students. However, the law did not mandate that teacher education faculty have the knowledge and skills to embed this content, it did not set standards of performance or content, and, it did not add any instructional time for credential students to gain this expertise.

An important additional aspect of the California teaching credential process is that it requires two years of induction, during which time a new teacher is to receive mentoring support from an experienced teacher. This approach addresses the problem of sending inexperienced teachers into the classroom to sink or swim on their own, and is supported by a body of research that has shown its effectiveness (Smith and Ingersoll, 2004; Gold, 1996). However, even this effective practice suffers from the problem mentioned previously, namely that California lacks sufficient numbers of teachers prepared to meet the educational needs of English learners. Consequently, there are not enough experienced EL teachers to serve as mentors to new teachers. Thus, the opportunity to strengthen teachers' skills in working with English learners is often forfeited.

…there are not enough experienced EL teachers to serve as mentors to new teachers.

Looking at the numbers

Currently California school districts employ thousands of teachers who hold CLAD certification, or who hold a similar certification indicating their preparation to teach English language development and/or to use instructional methods for English learners. Of the 306,548 teachers the state employed in 2004-2005 per California Basic Education Data System (CBEDS) data, 41% reported that they are prepared and authorized to teach English Language Development (ELD) and 31% said that they are authorized to teach Specially Designed Academic Instruction in English (SDAIE)[14]. The figures include all BCLAD teachers, as they are certified to teach both ELD and SDAIE. California teachers are far less likely to earn BCLAD, the more comprehensive credential, and according to 2004–2005 CBEDS data, 12% of the state's teachers have BCLAD[15] authorization. The considerable overlap among teachers who report having SDAIE and ELD training leads the Center for the Future of Teaching and Learning to estimate that only 48% of teachers in 2005 held one or more of those designations (Esch, et al., 2005).

Looking behind the numbers

California's teacher work force is not as prepared for teaching English learners as these numbers might suggest. Although teachers with CLAD training have many skills for teaching EL students— certainly more than teachers who have not had such training— by their own account many feel unprepared to teach English Learners (Gándara, Maxwell-Jolly, and Driscoll, 2005). In a 1999–2000 survey of almost 11,000 graduates of teacher credential programs in the California State University system, one-fourth responded that they felt they were either "somewhat prepared" or "not at all prepared" to teach English learners (Office of the Chancellor, 2003).

Further evidence that new teachers often do not feel prepared, is illustrated by an analysis of data from the statewide professional assignment report conducted by the Center for the Future of Teachers and Learning. The Center's researchers found that almost two-thirds of the new teachers who earned their credentials *after* content related to EL instruction was embedded in the teacher education curriculum, were not even aware that they were authorized to teach English learners. "Despite the state's efforts to embed EL training into every new teacher's preparation program, there is some evidence that newly credentialed teachers are unaware or unaffected by this training. In 2004–2005 only 34% of first- and second-year teachers reported to CDE that they are EL certified" (Esch et al, 2005).

In addition, among those with EL preparation are the 26,552 teachers authorized to teach EL students per Senate Bill 1969/395, but who have received considerably less training in EL methods than have CLAD teachers. Experienced teachers can earn this authorization by completing only 45 hours of staff development. Teachers with less experience can earn the certification after 90 hours, and are often authorized to teach either ELD or SDAIE, but not both. On the other hand, to earn CLAD certification, teachers must take 12 semester or 18 quarter units of upper division or graduate coursework—a far higher standard, but arguably still insufficient.

California schools have far fewer BCLAD than CLAD teachers. There is only one BCLAD credentialed teacher for every 234 English learners. BCLAD teachers have more skills for working with EL students, are versed in a wider array of instructional methods than CLAD teachers, and can communicate with parents and students in their own language. Moreover, in our study of 5,300 educators of English learners in California (Gándara, Maxwell-Jolly, and Driscoll, 2005) not only did BCLAD teachers report significantly greater confidence in their own ability to teach EL students, but those non-BCLAD teachers who did not have the ability to communicate with parents and students in their home language cited this as one of their greatest challenges. We also heard from teachers, especially in small districts, about how bilingual teachers serve as the "resident experts," often at a significant cost to their own classrooms and their personal and professional time.

Because of the way data on teachers is collected in California, it is not always possible to know the capacity in which teachers with specific credentials are serving. Although we know how many teaching credentials are issued, we cannot now tell how many teachers with CLAD and BCLAD equivalent credentials currently work in our classrooms. Teacher data is collected by *program type*, rather than by *credential designation*. For example, a BCLAD credentialed teacher who has bilingual skills and is teaching in an all-English program (such as "mainstream" or "Structured English Immersion") is counted as a teacher with certification for using English methods—but not as a bilingual teacher. Policymakers, schools, and school districts need more accurate data if California is to use its teacher resources effectively and to understand how teachers' knowledge and skills are being employed to the best advantage for students.

What Teachers Say

The evidence is clear that teachers' knowledge and skill are key to student learning, but that many teachers in California are inadequately prepared for the job they are being asked to do. In 2004 we conducted a survey of teachers of English learners to ascertain how they viewed the challenges of teaching these students and what kinds of supports they felt they needed to do so effectively (Gándara, Maxwell-Jolly, and Driscoll, 2005). A fundamental premise of the study was that it is impossible to provide teachers with practical guidance on how best to improve their EL teaching skills without knowing what they consider to be their greatest challenges and needs.

What we learned reinforces the notion that it is essential to provide California teachers with more and better preparation for working with English learners. In general, we found that although teachers expressed a wide range of concerns and placed different emphases on those concerns depending upon grade level taught, overall the challenges centered on a few key issues. Among the most frequently cited teacher challenges that might be alleviated through greater teacher preparation were 1) teachers' inability to communicate with students and their families, and 2) a lack of skills and tools necessary to meet the widely variable needs of the students in their classrooms.

Teachers working in grades K–6 placed the most emphasis on their need to communicate with families, while teachers in grades 7–12 cited as their greatest challenge communicating with students, often in order to motivate and encourage them. If "challenging without discouraging" students is difficult when teachers and students speak the same language, consider how much more difficult this is when they do not. Other work that we have done (Gándara et al, 2003; Gibson, Gándara, and Koyama, 2004) has given us insight into the reasons why secondary teachers may find motivating these students such a thorny problem. These include an impoverished curriculum, limited access to the resources of the schools, and the isolation that many English learners feel in American high schools. High drop-out rates also reflect the extent to which these students recognize the limitations of their high school curriculum. Even students who strongly value schooling can be discouraged when they cannot follow what is going on in the classroom.

Having the necessary instructional skills and tools to address widely variable student needs—both among EL students and between ELs and fluent English speakers—was also a critical concern of teachers. Specifically, teachers sought guidance regarding how to apply several commonly used curricular packages realistically and successfully with their EL students. As California policy increasingly favors mainstreaming English learners, classroom teachers receive greater numbers of students at all grade levels with widely varying skills in English and in academic subjects. For example, in the same classroom a teacher might have orally proficient EL students who need to make significant gains in their academic English skills, students who have just entered the country and have little or no English skills, native and non-native English speakers who have superior academic preparation, and students with little formal education.

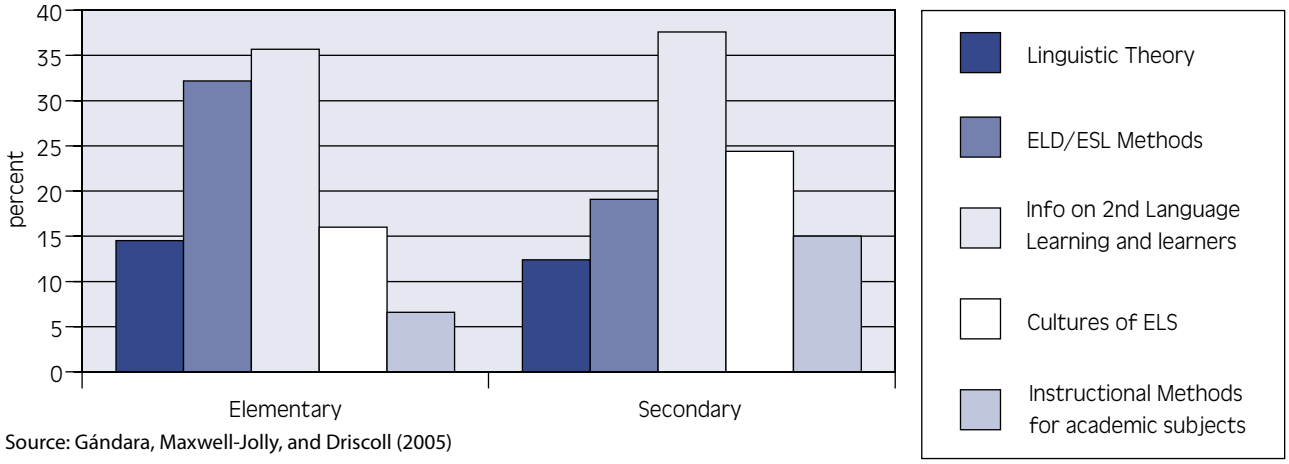
Other challenges for teachers working with EL students related to the teachers' level of preparation. For example, teachers said they had too little time to meet their students' needs, and teachers with specialized skills were better able to use classroom time effectively than those lacking such skills. Teachers also mentioned the challenge of determining what their students know and don't know in order to provide the best instruction. Although this has much to do with the lack of appropriate assessment instruments for EL and bilingual students, teachers can learn skills—including the primary language of their students that allow them to better diagnose their EL students' learning needs.

Teachers' Self-Rated Ability in English Learner Instruction

The importance of adequate teacher preparation to EL students' success is underscored by research on the connection between teachers' effectiveness and their belief in their own ability (self efficacy), and by findings regarding the relationship between teacher preparation and self-efficacy. There is a significant body of literature on the positive relationship between instructional effectiveness and self-efficacy (Armor et al., 1976; Rosenholtz and Simpson, 1984; Woolfolk et al., 1990; Goddard et al., 2000; Goddard, 2001), and on self-efficacy, optimism, and the will to create change (Bandura, 1993, 1995; Farber, 1991).

This led us to ask teachers to rate their ability to teach English learners effectively. We found that the more extensive the preparation of the teachers, the more confident they felt about their ability to teach English learners successfully in all subject areas.[16] Furthermore, teachers who had certification designed to prepare them in the primary language of their students felt the most prepared to teach in that language. In addition, teachers at both the elementary and secondary level who had received professional development related to the teaching of English learners rated themselves significantly more able to teach these students across all categories of instruction than teachers without such training.

FIGURE 8: Most Useful Type of EL-focused In-Service Completed by Classroom Teachers



Source: Gándara, Maxwell-Jolly, and Driscoll (2005)

Teacher Participation in Professional Development

Teacher preparation is critical for providing new teachers with the skills and knowledge to begin their professional teaching careers. However, formal learning should not stop there. Teachers, like other professionals, need ongoing professional development opportunities to extend and improve their job skills. This is even more critical in areas such as English learner education, because current credential programs generally do not provide teachers adequate preparation to work with EL students. In addition, while in the past many teachers did not have EL students in their classrooms, today many now find themselves having to teach EL students.

Despite what is known about the importance of teacher knowledge and skills to EL achievement, many teachers have received little professional development on how to work with English learners. For example, according to our survey results, 43% of teachers with 50% or more English learners in their classrooms had received no more than one in-service workshop that focused on the instruction of English Learners (and often none at all) during the previous five years. Moreover, while this one in-service consisted of multiple hours for some teachers, for others it was limited to a single after or before school workshop and ranged, according to teacher opinion, from helpful to not at all useful. For those teachers whose classrooms had 25–50% English learners, half had received no more than one in-service designed to help them address the learning needs of these students. Furthermore, current law requires that during teachers' first years of employment they receive professional development in order to augment what they learned in their credential program, and that some of this professional development focus on teaching EL students. Yet, we found that only half of the brand new teachers in the sample had done so.

Given earlier studies indicating that teachers in California, on average, received only about two hours of in-service training annually that was focused on English learner issues (Gándara et al, 2003), the findings of this study are not surprising. It is, however, disconcerting. Teaching English learners is a complicated challenge that requires significant skill. Even the best teacher pre-service programs cannot cover all the knowledge and skills required of an effective EL teacher. Teachers need appropriate professional development opportunities to gain the skills necessary for teaching EL students within their particular school and classroom context.

Teachers' Views Regarding Usefulness of Professional Development Experiences

Across the board, teachers in our survey most often cited purposeful professional development as having the greatest impact on their ability to teach English learners. Specifically, they pointed to professional development that focused on 1) how to teach a second language, and 2) the learning, developmental, and other factors unique to second language learners. With regard to all other professional development subjects they considered most useful, responses varied substantially by elementary and secondary teaching level.

Teachers also said that they learned the most through certain approaches to professional

development. These included observing other more expert teachers working with EL students, participating in a mentoring relationship with a more knowledgeable teacher, and working with other teachers at their own school in order to address problems across grades and subjects rather than in isolation.

SUMMARY

There is a critical need for more teachers with the appropriate professional preparation to work with English learners. Not only do the state's demographics make this essential—25% of public school students are ELs—but so does current state policy, which mandates that an increasing percentage of EL students be placed in mainstream classrooms. Estimates are that between 75–85% of all teachers have at least one English learner in their classrooms (Esch et al, 2005).

We must keep in mind that although a large number of teachers in California have some kind of official certification to teach English learners, few are well-prepared to do so. We should also consider that the "paper" figures for teachers who are prepared to work with EL students can be misleading. Caution in interpreting teacher readiness is in order, first because very few of these teachers have the most extensive preparation (BCLAD certification) to be able to communicate effectively with students and their families, and these few are stretched too thin. Second, the other types of credentials, although generally considered equal for hiring purposes, vary in their rigor and in the amount of teacher preparation they provide. And third, teachers themselves say that even their CLAD certification, although helpful, does not provide them with many of the skills they need—and could learn—to work with their EL students. Moreover, the current approach to preparing all teachers to work with EL students, although well intentioned, is not adequate. This is due in part to a lack of teacher education faculty across teacher credentialing institutions who have the expertise in teaching EL students.

POLICY IMPLICATIONS

There are many potential ways to provide teachers with the skills and knowledge they need to teach EL students effectively. Based on the findings presented above, we offer the following recommendations:

Districts should make structural changes to employ BCLAD teachers more efficiently.
We recommend that districts find ways for BCLAD teachers to share their expertise with school/district students, parents, and their colleagues, while meeting classroom obligations. Districts should also create more opportunities for BCLAD teachers' professional growth.

A study should be conducted to determine effective strategies for districts to recruit and retain BCLAD teachers.
Such a study should include exploration of what incentives and rewards for BCLAD teachers might encourage them to take on this extra work, what factors might attract more such teachers to a district, what might stimulate more local college students to go into bilingual education (particularly those from the home culture of EL students), and what kinds of support would keep more new teachers with bilingual skills from leaving the field.

A review should be conducted of the teacher credential curriculum that addresses EL instructional skills and, where necessary, improved an augmented.
We recommend a review of the content of instruction currently embedded in multiple and single subject credential programs that is designed to prepare teachers to work with EL students. In addition, we recommend greater support and guidance for California's teacher education programs in

building their staffs to teach these skills to California's prospective classroom teachers.

Induction programs for new teachers should focus more on EL instructional skills.
California currently has an extensive teacher induction program that provides new teachers with professional development and mentoring opportunities. Furthermore, all credential programs now prepare teachers to work with English learners, and part of the law requiring such preparation stipulates that new teacher induction include a focus on teaching English language learners. We recommend fulfillment of this requirement and that for all teachers without a specialist credential whose classrooms include English learners, this induction include a significant focus on teaching EL students.

Professional development, in general, should focus more on EL teaching.
We recommend that for all teachers without a specialist credential whose classrooms include English learners, this professional development should include a meaningful focus on teaching EL students.

While the above recommendations could be implemented and begin to show results rather quickly, we also recommend longer-term strategies for increasing the numbers of EL teachers and the level of their preparation for EL instruction. To accomplish these goals, we recommend the following:

Concentrate teacher recruitment efforts at the community colleges to find and train new teachers who have special knowledge of minority communities and languages, and have demonstrated an interest in teaching.
Currently, we lose most of these students before they complete a bachelor's degree (Kirst et al, 2004). Reasons for this loss include financial pressures, inadequate career counseling, and the lack of a focused academic goal. Therefore, we recommend state and federal policies that foster teacher preparation programs beginning at the community colleges. Such programs would offer EL-focused coursework and counseling, and participants would receive forgivable loans for educational expenses. At the completion of their community college coursework, participants in this program would receive a specialized Associate of Arts (AA) degree that would allow them to work as classroom aides. This would enable these students to continue their studies at a four-year college, earn sufficient income so they can forgo other work and instead focus on their teacher preparation studies, and gain valuable teaching experience. Similar support should be available for students already in the college pipeline who have special knowledge of minority communities and languages and have demonstrated an interest in teaching. They should be eligible for forgivable loans sufficient to ensure that they complete their undergraduate degrees and credentials in a timely manner, and quickly enter the teaching force. While, forgivable loan opportunities already exist, we suggest that to be maximally efficient such programs should provide students enough support to allow them to focus solely on their teacher preparation studies.

Strengthen the infrastructure that support teacher educators qualified to train current and future teachers to work with EL students.
As part of this effort, we recommend that schools of education, county departments of education, and other teacher preparation and inservice programs find ways to increase their capacity to prepare new and continuing teachers to teach English language learners effectively. As a means to this end, we recommend that teacher preparation institutions, as

well as other inservice providers, take greater advantage of the Mexican government's program that provides teacher trainers from Mexican universities to come to the US for a period of time to help prepare California's teacher education professionals to work with EL students.

ENDNOTES

[1] Under federal law, all students classified as English learners must receive services. Although states define and deliver these services differently, and inevitably some students do not receive services despite legal requirements, the majority of ELs are accounted for in these numbers.

[2] Data available at nces.ed.gov.

[3] Data available at cde.ca.gov.

[4] California Department of Education Language Census, 2005.

[5] These can be IFEP students, those who were initially identified as being fluent English proficient upon entry to school in California, or RFEP students, those who began school as English learners but have since become fluent English proficient.

[6] California Department of Education Language Census, 2005.

[7] Data from the National Center for Education Statistics at nces.ed.gov.

[8] California Department of Education Language Census, 2005.

[9] CAHSEE test data available at http://data1.cde.ca.gov/dataquest/.

[10] These goals are delineated in federal law resulting from landmark court cases *Lau v. Nichols* 414 U.S. 563 (1974); *Castañeda v. Pickard* (5th Cir. 1981).

[11] Non-EL students might be those whose first language is English and who do not speak another language at home, students who were bilingual and already proficient when they entered school, and students who began school as English learners but have met the academic and English language criteria to be redesignated as fluent English proficient (FEP).

[12] LAUSD divides its Structured English Immersion classes into two types: Model A, which is English only, and Model B, which allows some primary language support. Data are more difficult to interpret for Model A because cell sizes are smaller and the authors report a lack of confidence in these small numbers.

[13] SB 1969 was originally passed in 1994 and renewed as SB 395 in 1999. Information on current and past legislation can be found online at www.sen.ca.gov.

[14] Data obtained via personal communication with CBEDS analysts, February 16, 2006.

[15] Included in this number are teachers who earned an earlier version of the credential, the bilingual certificate of competence.

[16] We asked teachers to rate their ability to teach English learners in the following content areas: English reading, English writing, math, science, social studies, English language development, and primary language reading and writing.

REFERENCES

American Institutes for Research and WestEd (2006). *Effects of the implementation of Proposition 227 on the education of English Learners, K–12: Findings from a five-year evaluation.* Online at http://www.wested.org/cs/we/view/rs/804

Armor, D., et al., & Rand Corp. (1976). *Analysis of the school preferred reading program in selected Los Angeles minority schools (No. R-2007-LAUSD).* Santa Monica, CA: Rand Corporation.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*, pp.117-149.

Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self –efficacy in changing societies.* (pp. 1-45). New York: Cambridge University Press.

California Department of Education (2005). *Language census data*. Sacramento, CA. California Department of Education.

Civil Rights Project (2005). Confronting the graduation rate crisis in California. Cambridge, MA: Harvard University. Online at www.civilrightsproject.harvard.edu

Cortez, A. (2003). The emerging majority: The growth of the Latino population and Latino student enrollments. IDRA Newsletter www.idra.org/newslttr/2003/Jan

Darling-Hammond, L., Holtzman, D. J., Gatlin, S. J., & Heilig, J. V. (2005). Does teacher preparation matter? Evidence about teacher certification, Teach for America, and teacher effectiveness. *Education Policy Analysis Archives*, 13(42). Retrieved [2/16/06] from http://epaa.asu.edu/epaa/v13n42/.

Darling-Hammond, L., Chung, R., & Frelow, F. (2002). Variation in Teacher Preparation: How well do different pathways prepare teachers to teach. *Journal of Teacher Education, 53*(4), pp. 286-302.

Darling-Hammond, L., & Youngs, P. (2002). Defining "highly qualified teachers": What does "scientifically-based research" actually tell us? *Educational Researcher, 31*(9), pp. 13-25.

Darling-Hammond, L., Berry, B., & Thoreson, A. (2001). Does teacher certification matter? Evaluating the evidence. *Educational Evaluation and Policy Analysis, 23*(1), pp. 57-77.

EdSource (2006). *California exit exam gets real*. Online at: http://www.edsource.org/pub_abs_cahsee06.cfm

Esch, C. E., Chang-Ross, C. M., Guha, R., Humphrey, D. C., Shields, P. M., Tiffany-Morales, J. D., Wechsler, M. E., & Woodworth, K. R. (2005). *The status of the teaching profession 2005*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.

Farber, B. (1991). *Crisis in education: Stress and burnout in the American teacher*. San Francisco: Jossey-Bass.

Ferguson, R. F. (1991). Racial patterns in how school and teacher quality affect achievement and earnings. *Challenge, 2*(1), pp. 1-35.

Ferguson, P., & Womack, S. T. (1993). The impact of subject matter and education coursework on teaching performance. *Journal of Teacher Education, 44*(1), pp. 55-63.

Gándara, P. (2000). In the aftermath of the storm: English learners in the post-227 era. *Bilingual Research Journal, 24*, pp.1-13.

Gándara, P. Maxwell-Jolly, J. & Driscoll, A. (2005). Listening to teachers of English learners: A survey of California teacher challenges, experiences, and professional development needs. Santa Cruz, CA: Center for the Future of Teaching and Learning.

Gándara, P., Maxwell-Jolly, J. (2000). *Preparing teachers for diversity: A dilemma of quality and quantity.* Teaching and California's Future. Santa Cruz, CA: The Center for the Future of Teaching and Learning.

Gándara, P., J. Maxwell-Jolly, J., Garcia, E., Asato, J., Gutierrez, K., Stritikus, T., & Curry, J. (1999). *The effects of Proposition 227 on the instruction of English learners: Year one implementation*. Davis, CA: University of California, Linguistic Minority Research Institute, Education Policy Center.

Gándara, P., Rumberger, R., Maxwell-Jolly, J., & Callahan, R. (2003). English learners in California schools: Unequal resources, unequal outcomes. *Educational Evaluation and Policy Analysis, 11*(36).

Gándara, P., & Rumberger, R. (2003). *The inequitable treatment of English learners in California's public schools*. Santa Barbara, CA: University of California Linguistic Minority Research Institute.

Gibson, M.A, Gándara, P.G, & Koyama, J.P. (2004). *School connections: U.S. Mexican youth, peers, and school achievement*. Margaret A. Gibson (Ed.). New York: Teacher's College Press.

Goddard, R. D., & Goddard, Y. L. (2001). A multilevel analysis of the relationship between teacher and collective efficacy in urban schools. *Teaching and Teacher Education, 17*(7), pp. 807-818.

Goddard, R. D., Hoy, W. K., & Hoy, A. W. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal, 37*(2), pp. 479-507.

Gold, Y., 1996 Beginning teacher support. Attrition, mentoring, and induction. In CB. Courtney (Ed.) *Review of Research in Education*, pp. 548-594.

Gonzalez, J. E., L. Darling-Hammond, et al. (2000). Programs that prepare teachers to work effectively with students learning English. Washington, DC: ERIC Clearinghouse on Languages and Linguistics. http://www.cal.org/ericcll.

Haycock, K. (1998). Good teaching matters...a lot. *OAH Magazine of History, 13*(1), pp. 61-63.

Haycock, K. (2001). Closing the achievement gap. *Educational Leadership, 58*(6), pp. 6-11.

Hayes, K. and Salazar, J.J. (2001). E*valuation of the structured English immersion program. Final report: Year 1.* Program Evaluation Branch, Los Angeles City Schools.

Hayes, K. and Salazar, J. & Vukovic, E. (2002). E*valuation of the structured English immersion program: Final report: Year 2.* Program Evaluation Branch, Los Angeles City Schools.

Hill, D. (1998). *California public education on trial: Taking on the test.* (The Daily Republican), Fresno edition, May 19, 1998. Downloaded from the www.dailyrepublican.com/cbest_test. Html

Kirst, M., Antonio, A., & Conklin-Bueschel, A. (2004). *Improving the transition for high school to postsecondary education.* Stanford University: Policy Analysis for California Education working paper 04-1.

Lee, S.J. Y Kumashiro, K.K. (2005). *A report on the status of Asian-American And Pacific Islander education: Beyond the model minority stereotype.* National Education Association, Washinton, D.C.

Lucas, T., Henze, R., & Donato, R. (1990). Promoting the success of Latino language minority students: An exploratory study of six high schools. *Harvard Educational Review*, 60, pp. 315-340.

Office of the Chancellor, California State University (2003). Teacher education annual report. www.calstate.edu/TeacherEd/archive/annual_report0304/index.shtml

Ovando, C. & Collier, V. (1998). *Bilingual and ESL classrooms: Teaching in multicultural contexts.* 2nd ed. Boston: McGraw-Hill.

Rogers, J., Jellison Holme, J. & Silver, D. (2005). CAHSEE results, opportunity to learn, & the class of 2006: More questions than answers. UCLA/IDEA. Online at http://www.idea.gseis.ucla.edu/resources/exitexam/index.html

Rosenholtz, S. J., & Simpson, C. (1984). The formation of ability conceptions: Developmental trend or social construction? *Review of Educational Research, 54*(1), pp. 31-63.

Rumberger, R. (2004). Why students drop out of school. In *Dropouts in America,*

Confronting the Graduation Rate Crisis, Orfield, G. (Ed.). Cambridge, MA: Harvard Education Publishing Group.

Sanders, W. L., & Horn, S. P. (1995). The Tennessee Value-Added assessment system (TVAAS): Mixed model methodology in educational assessment. In A. J. Shinkfield & D. Stufflebeam (Eds.), *Teacher evaluation: Guide to effective practice*. Boston: Kluwer Academic Publishers.

Sanders, W. L., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. University of Tennessee Value-Added Research and Assessment Center.

Smith T.M. & Ingersoll, R.M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Educational Research Journal*, 41 (2).

Woolfolk, A.E., Rosoff, B. & Hoy, W.K. (1990). Teachers' sense of efficacy and their beliefs about managing students. *Teaching & Teacher Education*. 6 (2), pp. I37-148.

CHAPTER 8

Addressing the Needs of Low-Income Students

Elisabeth L. Woody and Melissa Henne
Policy Analysis for California Education

STATE AND FEDERAL ACCOUNTABILITY POLICES OVER THE LAST DECADE HAVE BROUGHT MUCH-NEEDED AWARENESS OF HOW OUR STUDENTS ARE ACHIEVING ACROSS RACIAL, LINGUISTIC, AND SOCIOECONOMIC SUBGROUPS. THIS CHAPTER LOOKS AT ISSUES OF ACHIEVEMENT ACROSS SOCIOECONOMIC STATUS (SES), FOCUSING SPECIFICALLY ON LOW-INCOME STUDENTS. We consider the persistence of gaps in achievement across SES and the resulting educational and economic implications, and review recent policy and educational strategies to address such gaps. Such issues are framed within the context of California's growing levels of poverty and increasing demands to improve student achievement.

It is critical that California's educators and policymakers continue to focus their efforts on the education of low-income students. In California, nearly one in every five children lives in poverty, and 48.7% of students are eligible for free or reduced lunch (NCES, 2004). More importantly, California shows a worsening trend on two key indicators of child poverty:

- The percentage of children living below the poverty line has grown from 18.2 % in 1990 to 19.5 % in 2000.
- The percentage of children living in high-poverty neighborhoods has also increased, from 23.4 % in 1990 to 29.6 % in 2000.

California's percentage of low-income children is higher than the corresponding national level and has risen since 1990, contrary to the national trend (Carroll et al., 2005).

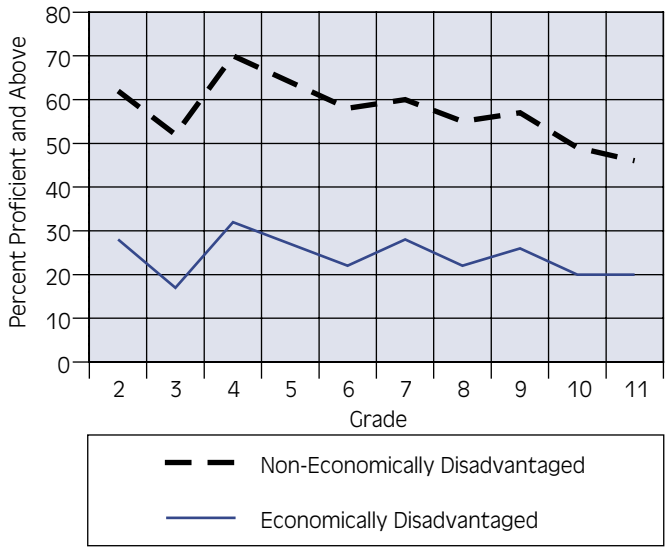
Research consistently finds a negative correlation between socioeconomic status and a student's ability to succeed in school (Coleman et al., 1966; Jencks et al., 1972; Sirin, 2005). This means nearly half of California's students are considered at risk of academic failure due to their family income level, as designated by their eligibility for free or reduced meals. As discussed in Chapter 4, today's accountability mandates demand high levels of achievement for all students, including low-income learners, with very real consequences for educators, administrators, and policymakers. Schools and districts face sanctions for missing targets of performance and proficiency, and state policymakers must grapple with the economic and practical challenges of intervention to improve student achievement.

UNDERSTANDING THE RELATIONSHIP BETWEEN POVERTY AND STUDENT ACHIEVEMENT

The link between poverty and lower student achievement is hardly news. Beginning with the Coleman Report in 1966, researchers have understood the impact of a student's background on his or her chances for success in school. The news, however, is that an achievement gap based on socioeconomic status persists, both nationally and within California, despite policy and educational efforts to address the needs of low-income students.

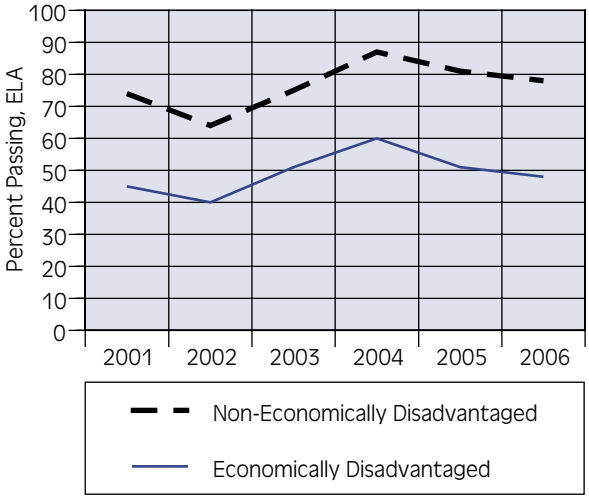
The National Center for Education Statistics (NCES) consistently reports a negative correlation between poverty and student achievement, as measured by mathematics and reading performance on the National Assessment of Educational Progress, or NAEP as it is commonly known (NCES, 2005). A comprehensive review of research on socioeconomic status and academic achievement between 1990–2000 finds that "parents' location in the socioeconomic structure has a strong impact on students' academic achievement" (Sirin, 2005, p. 438). Family socioeconomic status determines such factors as a child's access to resources at school and at home, and the quality of a child's school and classroom environment.

FIGURE 1: The Impact of Economic Disadvantage, English Language Arts Test Scorces, CST 2005



Source: Cailfornia Department of Education (2006)

FIGURE 2: The Impact of Economic Disadvantage, CAHSEE English Language Arts (ELA) Passage Rates, 2001-2006*



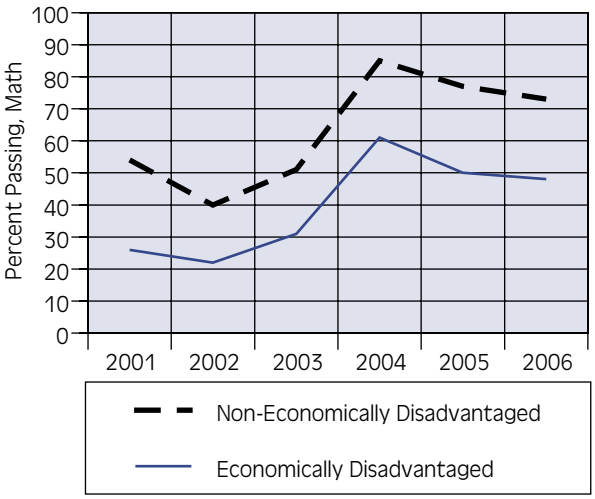
Source: Cailfornia Department of Education (2006)
* See Endnote #3.

California mirrors national trends, with significant gaps between the achievement of "economically disadvantaged" and "non-economically disadvantaged" students on the state's assessment of English Language Arts and Mathematics, as measured by the California Standards Test (CST). Low-income students are on average 30% less likely to achieve proficiency in these core subjects. Figure 1 demonstrates the persistent gap between lower and higher income students on the state's assessment of English Language Arts proficiency.

Such gaps in performance have real implications for California's schools. The state's Academic Performance Index (API) includes "socioeconomically disadvantaged" as a significant subgroup.[1] In 2005, 68 % of schools in California enrolled enough low-income students to constitute a significant subgroup.[2] Thus, two thirds of California's schools are required to meet growth targets for a socioeconomically disadvantaged subgroup under the state's accountability system.

Of further concern is the relationship between poverty and English learner (EL) students. For instance, in the 2004-05 school year 32% of Title I students in California were also identified as English learners (K.W. Ashley, personal communication, May 31, 2006). Historically, California has seen an increase in its percentage of EL students; "Although California's total public school enrollment has increased by 50 percent since 1981, the number of English learners has risen by nearly 300 percent."

FIGURE 3: The Impact of Economic Disadvantage, CAHSEE Mathematics Passage Rates, 2001-2006*



Source: Cailfornia Department of Education (2006)
* See Endnote #3.

(Tafoya, 2002). This poses a unique challenge for our schools, as a student's inability to understand English is negatively correlated with academic achievement (Jepsen and Alth, 2005; Gándara et al., 2003).

Results of the California High School Exit Exam (CAHSEE) show similar gaps as well. Approximately 25% fewer low-income students pass the exam as compared to their wealthier peers, and there are no signs of the gap narrowing since the exam's introduction in 2001 (Figures 2 and 3).[3]

Even when we see an overall increase in passing rates, low-income students are consistently less likely to pass the CAHSEE, as compared with their non-economically disadvantaged peers. Lower passing rates have real implications for students; beginning with the class of 2006, the exam is now required to receive a high school diploma.

The value of a high school diploma is unequivocal. High school dropouts, for example, have higher rates of involvement in the juvenile justice system and in incarceration, and consistently earn less than their more educated peers (Snyder and Sickmund, 2006). Recent data shows that average earnings ranged from $18,900 for high-school dropouts, to $25,900 for high school graduates, and to $45,400 for college graduates (Cheesman-Day and Newburger, 2002). Educators and policymakers simply can not afford to ignore discrepancies in achievement across socioeconomic status.

FEDERAL AND STATE POLICY EFFORTS TO ADDRESS THE NEEDS OF LOW-INCOME STUDENTS

Federal Policies – Title I and NCLB

Over the last few decades, several federal and state policies have sought to address the needs of low-income students. Most notable is Title I, a centerpiece of the federal Elementary and Secondary Education Act (ESEA), first signed into law in 1965. Originally designed to improve the academic achievement of poor and disadvantaged students, Title I distributes federal aid to needier schools. Upon signing the bill, President Johnson, who helped usher the bill through both houses of Congress, noted the bill's importance, remarking that, "By passing this bill, we bridge the gap between helplessness and hope for more than 5 million educationally deprived children....We rekindle the revolution—the revolution of the spirit against the tyranny of ignorance."[4]

While Title I funds were directed towards disadvantaged children, the federal government did not specify the types of services or programs that should be provided. Instead, states and school districts were in charge of distributing more than $1 billion in federal aid to local schools (Jennings, 2000). Originally, Title I was primarily used to fund supplementary programs, allowing schools to implement specific strategies to benefit the lowest-performing students (Farkas and Hall, 2000).

The program fell under sharp attack in the late 1960s when a report from the NAACP revealed that Title I funds were being used for a wide range of non-educational activities (Jennings, 2000). As a result of mounting evidence that states and districts were not using federal funds as intended by the law, federal lawmakers required two provisions—"comparability" and "supplement, not supplant"—to govern the distribution and allocation of Title I funds. The first provision requires that Title I schools receive funding that is comparable to the funding received by other schools, essentially mandating the equalization of funds before Title I money is distributed (Roza et al., 2005). The second provision requires that Title I funds do not replace state and local funding, ensuring that Title I provides extra resources for disadvantaged children. These provisions have remained in place and continue to govern

Under the Clinton administration, Title I faced yet another set of changes. States were required to have academic standards, define levels of student proficiency, and assess achievement.

the distribution and allocation of Title I funds under No Child Left Behind (NCLB) (Roza et al., 2005).

Title I met with further criticism in the 1980s, coinciding with the release of *A Nation at Risk* in 1983, as lawmakers grew increasingly frustrated with the policy's lack of clear guidelines to measure student achievement (Jennings, 2000). As a result of growing concern that Title I was failing to make progress, the 1988 reauthorization included major changes and stipulations. First, states were required to define levels of achievement for designated students. Second, states had to identify schools that failed to make adequate progress towards these goals. Finally, in response to concerns regarding the flexibility of the use of funds, Title I funds were no longer solely designated for specific services, but also gave schools the flexibility to offer schoolwide programs (Jennings, 2000). Under the new schoolwide program option, Title I schools could use their funds for resources that would benefit the entire school. This increased flexibility was intended to help schools with a high percentage of high-poverty students improve the instructional performance for the whole school.

The 1988 reauthorization required a school to have 75% or more of its students in poverty in order to choose a schoolwide program. The threshold for qualifying for a schoolwide program was set deliberately high, as lawmakers wanted to ensure that Title I funds continued to be used to benefit the neediest students (Farkas and Hall, 2000). Schools that did not meet the required poverty threshold, or those who chose not to adopt a schoolwide program could continue to use Title I funds to specifically target the academic needs of the lowest-performing students.

Under the Clinton administration, Title I faced yet another set of changes. States were required to have academic standards, define levels of student proficiency, and assess student achievement (Jennings, 2000). Furthermore, the poverty indicator for schoolwide programs was lowered, allowing schools to qualify for Title I funds if it had at least 50% or more of its students in poverty. This adjustment created a dramatic shift in the implementation of Title I, as a growing number of schools were able to use Title I funds to run a schoolwide program (Farkas and Hall, 2000).

Current Implementation of Title I in California

Title I currently provides more than $12.7 billion, reaching about 15.5 million students in both public and private schools across the United States (NCES, 2004). As of May 2005, there were 5,840 Title I schools in California, representing nearly 60% of California schools (California Department of Education, May 2005). The federal government estimated that California would receive more than $3 billion in No Child Left Behind (NCLB) funding in 2005, with Title I grants representing about $2 billion of that amount (EdSource, January 2004).

The reauthorization of the ESEA in 2001, commonly known as No Child Left Behind (NCLB), dramatically altered the implementation and requirements of Title I. As a result, the federal government's efforts hold all Title I schools and districts accountable for increasing and maintaining student achievement. Under NCLB, schools, districts, and states must meet their Annual Yearly Progress (AYP), a measure of student proficiency.[5]

Currently, schools and districts in California must meet the following criteria in order to make their AYP:

- A 95% participation rate on statewide assessments in English Language Arts (ELA) and Math.
- Reach an annual measurable objective (AMO). For 2005, 24.4% of students in elementary schools and elementary districts must be proficient in ELA and 26.5% of students must be proficient in Math. For 2005, 22.3% of students in high schools and high school districts must be proficient in ELA and 20.9% of students must be proficient in Math.
- An API score of 590 *or* 1 point growth.
- In addition, high schools must have at least a 82.9% graduation rate, *or* a +0.1% one-year change, *or* a +0.2% two-year average change (California Department of Education, 2005).

More importantly, under NCLB, schools that receive Title I funds and fail to meet AYP for two consecutive years are now subject to sanctions under Program Improvement (PI). Under PI, Title I schools

face multiple sanctions, including setting aside additional funds for professional development, providing students with school choice, restructuring the school, and replacing school staff and administration.

The Impact of Title I

Forty years after its implementation, Title I remains the largest policy effort to address the needs of low-income students in the U.S. Its effectiveness in improving student learning, however, is not always clear. Research on the impact of Title I reveals several common themes, including the following:

- Title I is correlated with gains in mathematics and reading achievement, with a stronger impact on math (Carter, 1984; Borman and D'Agostino, 1996).
- Gains in achievement are seen primarily in the elementary grades, with effects largely disappearing by high school (Carter, 1984; Borman and D'Agostino, 1996).
- While Title I serves a great number of low-income students, there are still many children who do not receive services (Puma et al., 1993).
- Teachers may hold negative views of students who are eligible for Title I services (Puma et al., 1993).

While there are clearly some benefits to Title I, researchers have raised questions about the policy's long-term effects and, ultimately, its ability to close gaps in achievement. As the authors of a comprehensive review of research of Title I from 1966 to 1993 conclude, "Title I alone can not be expected to serve as the great equalizer. The results do suggest, however, that without the program, children served over the last 30 years would have fallen further behind academically" (Borman and D'Agostino, 1996).

Any direct link between Title I funds and improvements in student achievement remains in question today. For example, a recent national study of the implementation of Title I in its current incarnation as part of NCLB found positive trends in student achievement in Math and English Language Arts. However, the authors conclude that "it is too early to say whether these trends are attributable to NCLB, to other improvement initiatives that preceded it, or a combination of both" (Stullich et al., 2006).

STATE AND LOCAL POLICIES—CATEGORICAL FUNDING AND WEIGHTED STUDENT FORMULA

The federal No Child Left Behind policy, in conjunction with Title I funding, provides a mandate for improving low-income student achievement. In conjunction with federal policies, state and local agencies have tried to further support low-income students with adjustments to the school funding process. A portion of California's categorical funding focuses resources on the most needy students.[6]

Categorical funding, a foundation for school finance in California, was originally intended to alleviate the burden of educating high-needs students by directing tax dollars towards specific programs or resources. However, following the Serrano decision and Proposition 13, California saw a proliferation of categorical funding programs.

In recent years the categorical funding system has improved as a result of the state consolidating categorical funding into six block grants. These changes represent an effort to reduce bureaucratic roadblocks and distribute funds more efficiently to districts. They also signal the state's acknowledgement of the need for a better balance between restriction and flexibility in the ways funds are allocated to districts. Ideally, this would allow districts to better serve the neediest students.

At the same time, districts have begun to experiment with how they distribute funds amongst their schools. One such effort is "weighted student formula" which decentralizes a district's power over certain school finance decisions, and puts money directly into the hands of principals. In theory, principals have the autonomy to decide how funds will be used at their school sites, including the allocation of funds for teachers and other personnel and materials. Also known as student-based budgeting, weighted student formula allows a district to create an allocation formula based on individual student characteristics or needs. Rather than relying upon the traditional method of basing allocations on the number of students and/or personnel, funds are allocated based upon specific characteristics of a school's student population. This results in a focus on the needs of individual students rather than on an average student (Petko, 2005).

Research suggests certain school and classroom practices are effective for low-income students. What is most promising is the consistency of findings that emerge from recent studies of effective schools serving low-income students.

While research and implementation remain limited, it is important to acknowledge the consideration of weighted student formula in state and national discussions of school finance reform. Within California, this system has been implemented in the San Francisco Unified School District (SFUSD). District leaders decided to employ student-based budgeting in the hopes of increasing equity and transparency in per-student funding across schools, as well as providing resources to match individual student needs. According to the district, each school "receives a budget denominated in dollars instead of positions and decides what staff and non-staff items to purchase with those dollars."[7] While the district office provides oversight and training, principals and their school site councils are responsible for developing their school's budget and academic plan. The amount of funding per student is determined by a student's grade level, English learner status, socioeconomic status, and special education status. Currently, almost 60% of the district's *unrestricted* funds are distributed using this weighted student formula. This has resulted in additional funding ranging from $155 to $530 for English learners and low-income students (Ackerman, 2004).

Currently, the Legislative Analyst's Office (LAO) is considering weighted student formula as one of several approaches to the distribution of supplemental funds, as part of a larger examination of issues of school finance. The LAO estimates that the use of a weighted student formula would translate into an additional $331 per student for low-income and English learners (P. Warren, personal communication, March 16, 2006). In order to further evaluate this funding approach, the Assembly Education Committee's working group on school finance is recommending that, as a pilot project, the state authorize a pilot program for groups of school districts to use weighted student formula with their categorical funds (Assembly Education Committee, personal communication, March 22, 2006).

Implementing weighted student formula will pose some serious challenges for policymakers and educators, including difficult decisions regarding which student characteristics are included in any formula, and what weight to assign to them. Furthermore, weighted student formula is dependent upon leadership at the school level, particularly among principals and other site leaders. Yet, it is not clear that principals have the skills or training to undertake and successfully implement a decentralized program (EdSource, May 2004). There may also be unintended consequences of students being misidentified into categories in order to receive additional funds. State agencies and local districts must have the capacity to provide adequate professional development and support regarding the implementation and use of a weighted student formula.

The concept of a weighted student formula would seem to provide educators with an effective means of addressing the specific needs of low-income students. Anecdotally and through preliminary research, such a system suggests potential. While united in scope, one study of three U.S. school districts using student-based budgeting showed promising gains in student achievement as compared with districts not employing this system (Ouchi, 2004). However, existing research remains inconclusive and its implementation in California is still too early and infrequent to assess any impact on student achievement. Further analyses are necessary to determine any real gains, particularly within the context of our state's educational policies and practices.

INSTRUCTIONAL STRATEGIES FOR LOW-INCOME STUDENTS: WHAT DOES THE RESEARCH TELL US?

While it may be difficult to determine the impact of particular policies such as funding allocation formulas on student achievement, research suggests certain school and classroom practices are effective for low-income students. What is most promising is the consistency of findings that emerge from recent studies of effective schools serving low-income students.

Just released this year, the "Similar Schools, Different Results" report provides a comprehensive analysis of the policies and practices within schools serving low-income students in California today (Williams, T., Kirst, M., Haertel, E. et al., 2005). With

colleagues from EdSource, Stanford University, and American Institutes for Research, we surveyed approximately 5,500 teachers and 250 principals in elementary schools serving low-income students across California. The purpose of the survey was to determine those policies and practices associated with higher student achievement. The schools in our sample fell within the 25th–35th percentile on the Student Characteristics Index.[8] Interestingly, within this narrow band, there is still a 250 point spread on the Academic Performance Index (API), which suggests that while socioeconomic status is one predictor of academic achievement, it is not the sole predictor. Thus, we sought to understand what distinguished those higher-performing schools from their lower-performing peers, given that they were all serving similarly challenged students.

Extensive analysis of the survey findings revealed several practices that were more common at high-performing than at low-performing schools serving low-income students. School and district practices found to be associated with higher student achievement include the following:

- **High expectations and a focus on student achievement across all subgroups.**
  Teachers and principals in higher performing schools were more likely to indicate a culture of high expectations for students within their institutions. These educators reported that their schools had well defined plans for instructional improvement, with a focus on meeting API and AYP targets. Interestingly, teachers and principals in higher performing schools were also more likely to report efforts to exceed API subgroup targets.

- **Consistency and alignment of a standards-based curriculum and instructional program, with support and oversight from the district.**
  Teachers in higher performing schools were more likely to indicate consistency of curriculum and instruction within and across grades, classroom instruction and curriculum materials in math and language arts aligned with state academic standards, and district support to address the instructional needs of English learner students. Principals in these schools were more likely to report clear expectations from the district for student achievement, aligned with the district's adopted curriculum, as well as district evaluation of the principal based on the extent to which instruction was aligned with the curriculum.

- **The use of assessment data to guide instruction and improve student achievement.**
  Educators in higher performing schools were more likely to indicate the extensive use of student assessment data by the district and the principal in an effort to inform instruction and improve student learning. Principals in these schools relied on assessment data from multiple sources, including curriculum program assessments, district-developed assessments, and the state's CST and CAT/6 assessments. They used the data to evaluate teachers' practices, to identify teachers who need instructional improvement, and to develop strategies to track the progress of struggling students.

- **The experience and certification of teaching staff, with support from the district for instructional and facilities resources.**
  Teachers in higher performing schools were more likely to indicate having a regular or standard certification for teaching in California. Teachers in these schools also reported having at least five years of full-time teaching experience; principal experience was also correlated with higher student achievement. Principals at higher performing schools were more likely to report that their districts provided sufficient instructional materials and support for supplementary instruction for struggling students, as well as support for facilities management.

Our survey findings suggest that the principal and district administrators are critical to ensuring high achievement among schools serving low-income students. Principals and district administrators in higher performing schools were more likely to map out and guide a vision for school success.

Alongside surveys of teachers and principals, our research team conducted interviews with 20 district

superintendents and/or their key staff, in an effort to understand the role of the district in raising achievement for low-income students. Superintendents were asked to discuss the three most effective strategies they employed to help improve student achievement at schools that serve high percentages of low-income students. Interestingly, there were strong parallels between the strategies mentioned in our interviews with superintendents and the common findings from our teacher and principal surveys. The five most commonly cited district strategies included the use of data and assessment to inform instruction; providing professional development that helped teachers and principals understand and implement various assessments and curriculum packages; the use of a curriculum package to guide instructional coherence; the role of the principal in managing the implementation of accountability; and the presence of a school culture that valued high expectations regarding student achievement.

Other recent research of schools serving low-income students across California as well as Virginia, North Carolina, and Kentucky reveals similar characteristics among the higher achieving institutions. A joint legislative review team in Virginia, for example, found certain elements and practices common in higher performing schools, despite significant demographic challenges (Joint Legislative Audit and Review Commission, 2004). Common elements included the presence of strong and stable principal leadership, an environment conducive to learning, and an effective teaching staff. Common strategies included the use of assessment data to identify student weaknesses and teacher effectiveness, the alignment of curriculum with proper pacing and resources, the differentiation of instruction and remediation, and maximizing the amount of time spent on instruction. The Virginia study also noted the critical role of the principal in higher performing schools, in continually striving to provide the support needed for students to be successful regardless of background.

Researchers in Kentucky (Kannapel and Clements, 2005) found the following characteristics present in high performing, high poverty schools:

- High expectations that were communicated in concrete ways
- Respectful relationships among adults, between adults and students, and among students, including a culture that treated disadvantaged students in "fundamentally similar ways" as advantaged students.
- Strong focus on academics, instruction, and student learning
- A system in place to regularly assess the progress of individual students and to plan or change instruction to meet the student's needs
- Leadership style varied, but all shared a collaborative decision-making process
- Strong faculty work ethic and morale
- Careful and intentional manner in which teachers were recruited, hired, and assigned.

Finally, a recent Education Trust (EdTrust, 2005) study found similar characteristics in seven "high-impact" high schools in California and North Carolina. These schools had both a significant population of students of color and above-average proficiency levels on state math and/or reading assessments. Furthermore, the schools had greater than expected academic growth with previously low-performing students, and had at least an average ability to keep students in school, as well as average, smaller than average, or declining achievement gaps. Schools were compared to others with similar demographics but only average gains.

EdTrust researchers found the following conditions to be associated with higher student achievement:

- Schools exhibit a culture that is clearly focused on preparing students for college and career goals.
- Educators have consistently high expectations for all students and take responsibility for students' success.
- Schools provide extra help to ensure students stay on track with graduation and college-prep requirements and have measures in place to identify students in need before it is too late.
- Teacher assignments are made primarily on the basis of the needs of students.
- Schools put a high priority on instructional time, arranging extra time for students who have fallen behind, and ensuring that students spend more time on task and in the classroom.

While state and national assessment data show a strong correlation between socioeconomic status and student achievement, these recent studies suggest opportunities to disrupt patterns of low achievement. Our research, and that of others on effective schools serving low-income students, consistently reveals the importance of a culture of high expectations, coupled with stable leadership and a vision for school improvement; the use of academically rigorous, standards-based curriculum and instruction; and the use of diagnostic assessments to track student progress and identify student needs.

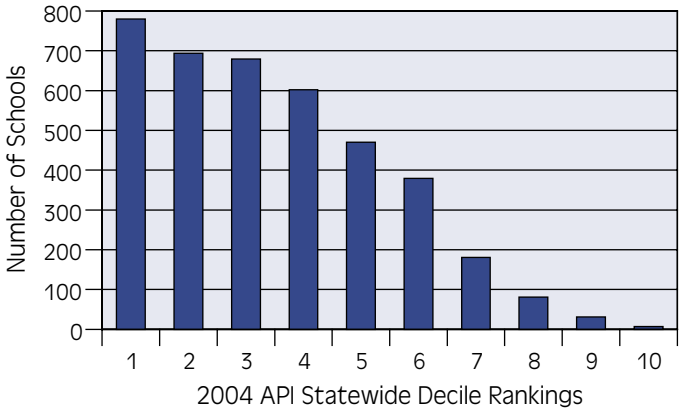
This research also reminds us of the critical need to build capacity among educators and administrators at the school and district levels, in order to create the aforementioned conditions for student learning. Without such capacity, any efforts to implement and sustain reform will fail. And it is precisely at this juncture of capacity and reform that we find the role of the state.

POLICY IMPLICATIONS

As this chapter illustrates, there are a variety of reform strategies and policies designed to help low-income students. These programs recognize the link between poverty and educational attainment, and hope to increase a school's or district's capacity to educate their most disadvantaged students. Yet as targets and sanctions increase under NCLB, California, like many states, faces mounting pressure to improve the achievement of all students, but particularly low-income students who consistently fail to meet academic targets.

What is perhaps most notable about the recent research on high performing, high-poverty schools is the consistency of findings in terms of the characteristics and practices in these institutions, both throughout elementary and high schools, and within California as well as across the nation. These studies provide insight into the strategies that work best for low-income students. The challenge for policymakers is to know how best to support school and district efforts to implement and sustain those strategies.

FIGURE 4: Distribution of Schools With More Than 50% Economically Disadvantaged Students, Across 2004 API Statewide Decile Rankings



Source : Tempes, West Ed (2006)

Limited state resources need to continue to target the most disadvantaged students.

Over the last seven years, California policymakers have designated funds to help improve low-performing schools, first through the Immediate Intervention/Underperforming Schools Program (II/USP), and now through the High Priority Schools Grant Program (HPSGP). While the initial II/USP efforts reached schools in the lowest five deciles of performance, severe funding restrictions have resulted in HPSGP's focusing solely on schools in the lowest two deciles. This focusing of resources allows the state to reach a significant population of low-income and otherwise disadvantaged students within the state's fiscal constraints. As indicated by Figure 4, schools with a majority of low-income students are disproportionately represented in the lowest deciles (Tempes, 2006).

API data for Decile 1 schools shows an average gain of 176 points from 1999–2003,

compared to the state average growth of 86 points (Bassok et al., 2004). However, while the majority of Decile 1 schools show noticeable growth, they still have a great distance to cover. For example, in 2003 the average API score for Decile 1 elementary schools was 576, a difference of over 200 points from the state target of 800 (Bassok et al., 2004). In order to help the schools with the greatest proportion of low-income students, the state should continue to dedicate additional resources to Decile 1 and 2 schools.

The state can continue to support the use of curriculum standards and diagnostic assessments.

As indicated in the studies previously discussed in this chapter, there is growing evidence that certain school and classroom strategies are successful in raising achievement among low-income students. In particular, the research suggests a need to support educators' understanding and use of curriculum standards and diagnostic assessment data. California's curriculum standards already provide educators with a clear roadmap of expectations for student learning. The state should continue to support the use of curriculum standards through initiatives that help teachers implement standards into their daily classroom practice.

Where standards provide a roadmap for teaching and expectations for learning, diagnostic assessments can provide a roadmap of student learning and for areas of improvement. However, educators often lack the capacity to interpret assessment data to inform practice (Armstrong and Anthes, 2001; Noyce et al., 2000; Sharkey and Murnane, 2003). The state should identify districts and schools that have shown considerable success in creating data systems, and facilitate the sharing of effective strategies to educators across the state. Additionally, the state should continue to build the individual student identifier system (CALPADS) and ensure that schools and teachers have adequate professional development to make the connections between assessment results and student learning.

Provide professional development that meets the needs of today's educators and students.

Research tells us that when professional development provides content-based knowledge and is implemented in a sustained, consistent fashion, it can lead to increased student achievement (Darling-Hammond, 1998; Garet et al., 1998; Porter et al., 2000). However, as discussed in Chapter 7, professional development does not always address the specific needs of teachers and their students.

In our own research of low-income schools, we asked teachers and principals to rank their top three priorities for additional professional development. This provided us with a critical understanding of where teachers and principals felt there were gaps in their abilities, and ultimately how best to develop the capacity of educators working with economically disadvantaged students.

Interestingly, teachers in both high-performing and Program Improvement (PI) schools noted similar priorities, indicating a need for professional development in instructional strategies for multiple learning styles, and English Language Arts and Math curriculum programs. Teachers in lower-performing schools also noted the need for professional development around instructional strategies for English learners.

Principals in low-income schools across all performance levels in our study noted the need for professional development concerning the use of assessment data. Principals in the low-performing and PI schools indicated a need for additional training around instructional strategies for EL students; and

principals in PI schools also wanted additional training in implementing a standards-based curriculum as well. In addition, principals from low-performing schools also requested professional development that focused on helping them develop a school plan or shared vision as their main priorities. Finally, principals in the higher performing schools wanted additional training in evaluating teachers' instruction and addressing multicultural/diversity issues at their schools.

Teachers and administrators need professional development that is directly applicable to the daily challenges they face inside their schools. Our research findings provide policymakers with a clear idea of the specific areas of professional development, in order to build capacity among educators serving low-income students. Current professional development offered by the state may not always be coherent and may not always be linked to the needs of teachers and their students. The California legislature recently passed a new education bill (AB 2109) that would require school districts receiving state professional development grant funds to analyze disaggregated achievement data and structure their professional development programs to focus on improving achievement according to the performance of each subgroup. Such a proposal would provide districts with the flexibility to implement professional development that meets the needs of their specific teachers and students. Ultimately, any further legislation for professional development needs to build upon the lessons learned from previous state-mandated efforts.

California has a strong foundation of policies and programs that target low-income students. It is the role of the state to build educators' capacity to implement those policies and programs and to sustain higher levels of student achievement. While the research on high performing, low-income schools points to common strategies, it is important for policymakers to remember that there is no one magic bullet to improve achievement for low-income students. Rather, the solution lies in finding a balance between supporting strategies that have proven successful across a wide range of schools, and allowing individual schools and districts the flexibility to address the needs of their specific communities.

ENDNOTES

1 A numerically significant subgroup is defined by the California Department of Education (CDE) as having "at least 100 or more students with valid STAR scores or 50 or more students with valid STAR scores who make up at least 15% of the total valid STAR scores." http://www.cde.ca.gov/ta/ac/ay/apiaypelements04.asp. The (CDE) defines economically disadvantaged as "a student whose parents both have not received a high school diploma OR a student who participates in the free or reduced-price lunch program." http://www.cde.ca.gov/ta/ac/ap/glossary06c.asp

2 http://api.cde.ca.gov/datafiles.asp

3 Data from Figures 2 and 3 includes first-time and repeat test takers, as reported by the CDE.

4 Obtained courtesy of John Woolley and Gerhard Peters at The American Presidency Project, University of California at Santa Barbara, http://www.presidency.ucsb.edu.

5 For further discussion of California's proficiency standards, see Chapter 4.

6 http://cde.ca.gov/fg/aa/ca/index.asp

7 http://portal.sfusd.edu/template/default.cfm?page=initiatives.formula

8 The Student Characteristics Index (SCI) includes such factors as socioeconomic status, race or ethnicity, parent education level, and English learner status. Schools within the 25th–35th percentile of SCI serve California's significantly disadvantaged students.

REFERENCES

Ackerman, A. (2004, August). The weighted student formula: A superintendent's perspective. *The School Administrator Web Edition*. Retrieved March 28, 2006,

from http://www.aasa.org/publications/content.cfm?ItemNumber=1190

Armstrong, J., & Anthes, K. (2001, April). Data-driven policymaking (Policy Brief). Denver, CO: Education Commission of the States. Retrieved January 11, 2005, from http://www.ecs.org/clearinghouse/30/69/3069.htm

Bassok, D., Davis, D., & Raymond, M. (2004). *Not condemned to fail: An analysis of California's low performing schools.* Stanford, CA: Hoover Institution.

Borman, G.D., & D'Agostino, J.V. (1996). Title I and student achievement: A meta-analysis of federal evaluation results. *Educational Evaluation and Policy Analysis,* 18(4), 309-326.

California Department of Education. (2005). *2005 Accountability progress report*. Sacramento, CA: California Department of Education.

California Department of Education. (2005, May). *State schools Chief O'Connell announces Title I academic achieving schools*. Sacramento, CA: California Department of Education. Retrieved January 4, 2006, from http:www.cde.ca.gav/nr/ne/yr05/yr05re154.asp

Carroll, S.J., Krop, C., Arkes, J., Morrison, P.A., & Flanagan, A. (2005). *California's K-12 public schools: How are they doing?* Santa Monica, CA: RAND.

Carter, L. F. (1984). The sustaining effects study of compensatory and elementary education. *Educational Researcher*, 13(7), 4-13.

Cheesman-Day, J., & Newburger, E.C. (2002, July). The big payoff: Educational attainments and synthetic estimates of work-life earnings (PC23-210). Washington, DC: U.S. Census Bureau.

Coleman, J.S., et al. (1966). *Equality of educational opportunity*. Washington, DC: U.S. Government Printing Office.

Darling-Hammond, L. (1998). Teacher learning that supports student learning. *Educational Leadership,* 55(5), 6-11.

EdSource. (2004, January). *No child left behind? The impact of the federal NCLB act so far.* Mountain View, CA: EdSource. Retrieved May 2, 2006, from http://www.edsource.org/edu_nclb.cfm

EdSource. (2004, May). *Weighted student formula concept enlivens school finance debate.* Mountain View, CA: EdSource.

Education Trust, The. (2005, November). *Gaining traction, gaining ground: How some high schools accelerate learning for struggling students.* Washington, DC: The Education Trust.

Farkas, G., & Hall, L.S. (2000). Can Title I attain its goal? In D. Ravitch (Ed.), *Brookings papers on education policy 2000* (pp 59-123). Washington, DC: The Brookings Institution.

Gándara, P., Rumberger, R., Maxwell-Jolly, J., & Callahan, R. (2003). English learners in California schools: Unequal resources, unequal outcomes. *Education Policy Analysis Archives*, 11(36). Retrieved April 15, 2005, from http://www.epaa.asu.edu/epaa/v11n36

Garet, M.S., Porter, A.C., Desimone, L., Birman, B.F., & Yoon, K.S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945.

Jencks, C., et al. (1972). *Inequality: A reassessment of the effect of family and schooling in America*. New York, NY: Basic Books, Inc.

Jennings, J.F. (2000). Title I: Its legislative history and its promise. *Phi Delta Kappan*, 81(7), 516-522.

Jepsen, C., & Alth, S. (2005). *English learners in California schools.* San Francisco, CA: Public Policy Institute of California.

Joint Legislative Audit and Review Commission. (2004). *Review of factors and practices associated with school performance in Virginia.* Richmond, VA: Author.

Kannapel, P.J., & Clements, S.K. (2005). *Inside the black box of high-performing high-poverty schools*. Lexington, KY: Prichard Committee for Academic Excellence.

National Center for Educational Statistics. (2004). *State profiles: The nation's report card – California*. Washington, DC: NCES. Retrieved January 4, 2006, from http://nces.ed.gov/nationsreportcard/states/profile.asp

National Center for Educational Statistics. (2005). *The condition of education 2005.* Washington, DC: NCES.

National Commission on Excellence in Education. (1983). *A Nation at Risk*. Washington, DC: U.S. Government Printing Office.

Noyce, P., Perda, D., & Traver, R. (2000). Creating data driven schools. *Educational Leadership,* 57(5), 52-56.

Ouchi, W.G. (2004). *The implementation of a decentralized organization design in three large public school districts: Edmonton, Seattle and Houston*. Los Angles, CA: University of California, Los Angeles.

Petko, M. (2005). *Weighted student formula (WSF): What it is and how does it impact educational programs in large urban districts?* Washington, DC: National Education Association.

Porter, A.C., Garet, M.S., Desimone, L., Yoon, K.S., & Birman, B. (2000). *Does professional development change teaching practice? Results from a three-year study* (DOC #2000-04). Washington, DC: U.S. Department of Education.

Puma, M. J., et al. (1993). *Prospects: The congressionally mandated study of educational growth and opportunity. The interim report.* Washington, DC: U.S. Government Printing Office. (ERIC Document Reproduction Service No. ED361466)

Roza, M., Miller, L., & Hill, P. (2005, August). *Strengthening Title I to help high poverty schools: How Title I funds fit into district allocation patterns* (Working Paper). Seattle, WA: Center on Reinventing Public Education.

San Francisco Unified School District. (2005). *Weighted student formula- FAQ.* San Francisco, CA: Office of the Superintendent of San Francisco Unified School District. Retrieved January 11, 2006, from http://portal.sfusd.edu/template/default.cfm?page=initiatives.formula

Sharkey, N.S., & Murnane, R.J. (2003). Learning from student assessment results. *Educational Leadership*, 61(3), 77-81.

Sirin, S.R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research,* 75(3), 417-453.

Snyder, H., & Sickmund, M. (2006). *Juvenile offenders and victims: 2006 national report* (NCJ 212906). Washington, DC: Department of Justice.

Stullich, S., Eisner, E., McCray, J., & Roney, C. (2006). *National assessment of Title I interim report. Volume 1: Implementation of Title I* (NCEE 2006-4001). Washington, DC: Institute of Educational Sciences.

Tafoya, S. (2002, February). *The Linguistic Landscape of California Schools.* San Francisco, CA: Public Policy Institute of California.

Tempes, F. (2006, March). *High impact: Strategic state intervention in California's struggling schools and districts.* Paper presented at the meeting of the PACE Legislative Seminar series, Sacramento, CA.

Williams, T., Kirst, M., Haertel, E., et al. (2005, October). *Similar students, different results: Why do some school do better?* Mountain View, CA: EdSource.

CHAPTER 9

Expanding and Improving Preschool

Margaret Bridges
Policy Analysis for California Education

CALIFORNIA ACTIVISTS AND POLICYMAKERS—AFTER SUCCESSFULLY ADVANCING QUALITY CHILD CARE OPTIONS OVER THE PAST HALF-CENTURY — CONTINUE TO PUSH FOR EQUITY IN WHICH CHILDREN BENEFIT AND FOR STRONGER GAINS FROM STATE AND LOCAL CHILD-CARE PROGRAMS. State and federal agencies now spend over $3.7 billion annually on a variety of child care programs, ranging from vouchers for care provided by a grandparent, to formal preschool efforts (LAO, 2005).

Research evidence continues to mount that details how high-quality centers and family child care homes yield strong cognitive and linguistic benefits to children from poor families. Several counties have embarked on ambitious efforts to serve these children through such programs. The evidence is less clear about the sustainable benefits for children from middle-class and affluent families (Loeb et al., 2006; Magnuson, Ruhm, and Waldfogel, 2004).

Filmmaker Rob Reiner's Proposition 82—defeated in the June 2006 election—sparked much debate over how to advance the development of preschool-age children. Among the middle-class, preschool—or nursery school as it was called—offered a means for socializing children before they started kindergarten. Children would go to nursery "school" several days a week for a few hours, learning to share and play well with their classmates. Early educators and their professional associations—backed by most developmental researchers—encouraged learning through structured play, allowing preschoolers to engage in a variety of activities and learn to form friendships.

This purpose was broadened with the advent of Head Start in the 1960s—as policymakers defined preschool as a mechanism for advancing the early cognitive growth and social skills necessary for doing better in kindergarten and elementary school. Research has indicated that preschool can have broad and sustained benefits for disadvantaged children (Campbell et al., 2002; Heckman, 2000; Loeb et al., 2004; Reynolds, Temple, Robertson, and Mann, 2001; Shonkoff and Phillips, 2000). In response to the achievement gap between ethnic and socioeconomic groups—evident at kindergarten entry—preschool has been targeted as a potentially potent early intervention (Reardon, 2003; Rumberger and Arellano, 2003; Rumberger and Tran, 2006).

The dramatic rise in the share of mothers with young children who work outside the home—climbing from 15% in the 1950s to almost two-thirds today—represents another major force in increased demand for child care. About two-thirds of California four-year-olds already attend preschool centers

Preschool refers to half-day or full-day, center-based programs that aim to nurture children's academic and social-emotional development. Increasingly, child-care centers are being called preschools, indicating their support of children's academic achievement. Yet since the federal government interviewed directors of child care centers in 1990, the border between child care and preschool has blurred (Kisker et al., 1991). The old conception of "custodial" child care versus enriched nursery school has given way to a continuum of low- to high-quality center-based programs, regardless of whether they are called a center or preschool.

(RAND, estimates of 2001 Census Bureau data). Given the number of mothers requiring some alternate care for their young children and evidence of preschool's benefits, enthusiasm has been fueled for widening access for California children (Barnett, Hustedt, Robin, and Schulman, 2005; Cooper and Dukakis, 2004). Yet, children from different backgrounds enroll in preschool at discrepant levels (see Figure 3), which may have implications for their later achievement.

Most recently, the interplay between K-12 school reform and child care activists has prompted sharper debate over the basic goals of preschool. As local educators face intensifying pressure to raise test scores—pressed by Sacramento and Washington policymakers—the potential ability of preschool to advance knowledge of language and mathematical concepts has become quite attractive. Proposition 82, for example, would have authorized the state department of education to devise "content standards" for all publicly funded preschools, aligning classroom practices to the academic knowledge advanced in elementary schools.

While Proposition 82 failed to pass, policymakers moved forward on legislation aimed at expanding and improving preschools. As part of Governor Schwarzenegger's stated efforts to close achievement gaps by boosting preschool opportunities, he signed AB 172 in September 2006. The legislation authorizes preschool programs to spend $50 million a year to hire more teachers, improve staff training, and build literacy and outreach programs. Preschools qualify for program funds if they are located near elementary schools with low Academic Performance Index scores (the lowest third). The bill also includes funding accountability and program evaluation provisions.

Few disagree that child-care teachers can do more to advance pre-literacy skills. But some school districts already have adopted curricular packages that focus on instruction in pieces of knowledge, taking away from time spent engaging in more self-directed exploration of cognitively demanding tasks and social relationships (for review of these developments, Fuller, Bridges, & Pai, in press).

So, as policy options are considered—and compared to empirical evidence—we should not lose track of the basic goals of classroom and home-based child care for very young children. Government and educators have the power to either inform—or make decisions for—parents.

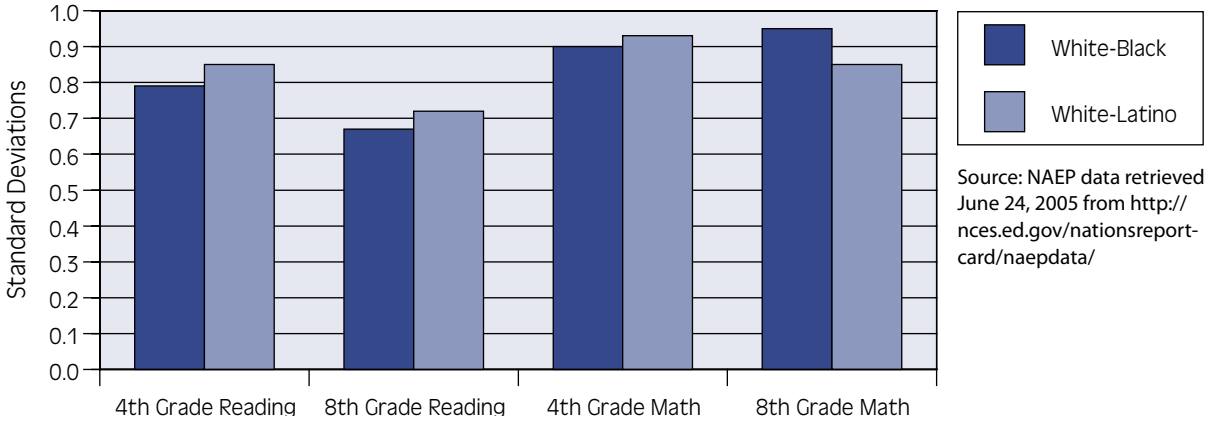
Why Quality Child Care and Preschool Is Important

Despite dramatic growth in child care and preschool programs since the 1960s many five-year-olds enter kindergarten already behind in their basic cognitive and language skills.[1] These gaps are wide, especially for African American and Latino children from low-income communities, compared with their peers from better-off families. Almost the entire disparity observed in fourth-graders' reading scores can be observed in pre-reading skills and linguistic proficiencies at age five (Rumberger and Arellano, 2003; Rumberger and Tran, 2006).

Given that preschool enrollment varies across groups—affluent children are more likely than their economically disadvantaged peers to attend preschool (see Figure 5)—expanding preschool access may counter these achievement discrepancies. Yet, a dilemma has arisen with respect to *universal* preschool: if all children benefit from preschool, and parents of affluent children are more likely to enroll their children in these out-of-home programs, a universal program may support or even exacerbate the disparities seen across groups (Bridges et al., 2006; Loeb et al., 2005).

Figure 1 shows the magnitude of the achievement gap between whites and blacks, and between whites and Latinos, in reading and math in fourth and eighth grade in California. (The data is derived from the National Association of Educational Progress or NAEP, dubbed "The Nation's Report Card"). This gap is large in fourth grade and remains sizeable in eighth grade, although decreases slightly (except between whites and blacks in math, where it increases slightly).

FIGURE 1: Achievement Gaps in Reading and Math for Whites-Blacks and Whites-Latinos in 4th and 8th Grade in California (NAEP, 2005)



Source: NAEP data retrieved June 24, 2005 from http://nces.ed.gov/nationsreportcard/naepdata/

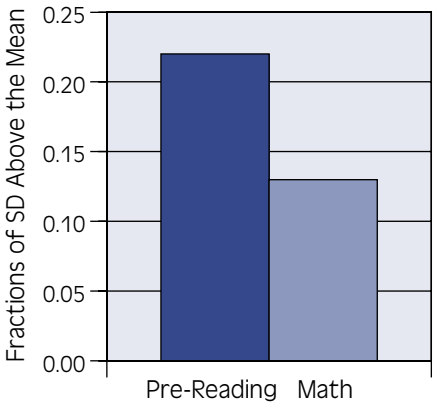
The achievement gaps are represented in a unit of measurement called an effect size, which represents the difference in achievement test scores as a fraction of a standard deviation (Cohen 1988). A standard deviation (SD) from a mean test score portrays the array of children's test scores on either side of the average. Given the classic normal curve of test scores, where most children are clustered around the average score, two-thirds of all children will score within one SD above or below the mean. By depicting a group's fraction of a SD above or below the mean, one can compare differences in variables of interest within the same study and between different ones. One can also compare the size of the achievement gap with the effect size of interventions designed to close it.

These achievement gaps—marked at fourth and eighth grade—are even present at school entry in kindergarten (Bridges, Fuller, Rumberger, and Tran, 2004). They translate into children starting kindergarten at dramatically different levels. For example, at kindergarten entry there is a three-month discrepancy between white and (English-proficient) Latino children in pre-reading skills, and a larger discrepancy in math. Low-income children start kindergarten more than two months behind middle-class children in reading, and about six months behind children from affluent families. This underestimates the white-Latino achievement gap because the assessment procedure excludes those Latino students who are not yet proficient in English—about 30% of the Latino sample.

How do we boost the performance of children from low-income families? Studies of high-quality, high-cost preschools—such as Perry Preschool in Ypsilanti, Michigan or Abecedarian Preschool in Chapel Hill, North Carolina—provide evidence that they can benefit low-income children in cognitive, language, and behavioral outcomes. They have been shown to prepare children for starting school and have notable longer-term effects, including: higher test scores, lower rates of grade retention and referral to special education, as well as higher rates of high school graduation. What we don't know is how to build a large network of preschool programs that can maintain high levels of quality and yield such notable benefits. Nor do we know—across an array of possible inputs and classroom practices—how to invest in quality improvements in a cost-effective manner.

These intervention programs with such promising results have been conducted with small groups of children but sizeable resources. Another program, the Chicago Child-Parent Center (CPC), attempted to take a comprehensive intervention to scale and offered a variety of services to thousands of primarily poor African-

FIGURE 2: Developmental Gains from Participation in Center-Based Programs



Source: Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 weighted by fall kindergarten child-parent-teacher weight (C1CPTW0). California Sample

American children in low-income neighborhoods in Chicago (Reynolds et al., 2001). This program offered preschool, home visits, health care, parenting classes, and social services to their participating families.

Children who participated in the CPC programs displayed significant cognitive gains in comparison to similar children who did not attend (Karoly and Bigelow, 2005). The CPC children were less likely to be in special education programs, less likely to repeat grades, and more likely to graduate high school (Reynolds et al., 2001). Most notably, these significant effects were maintained into adolescence, particularly if the children remained in enriched classrooms (Reynolds et al., 2001).

While the scale of the CPC study shows promising results, it, too, provided extensive resources beyond mere preschool participation to its participants. Moreover, the sample was a distinct group: participants were largely poor, African-American children living in Chicago—a homogeneous group compared to the great diversity of children in California.

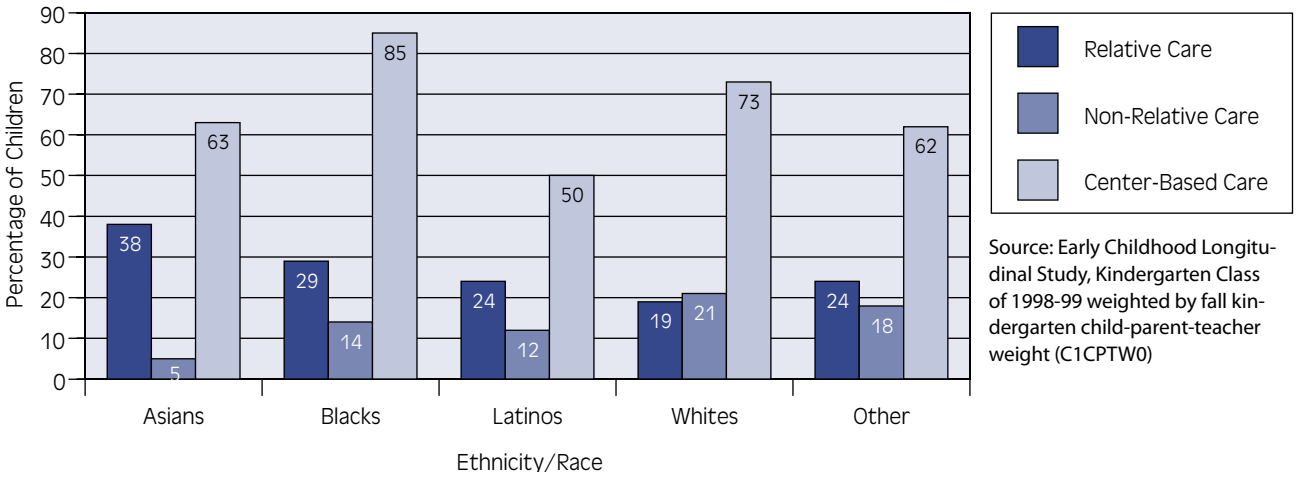
Other Evidence on the Benefits of Preschool

Recent data from the Early Childhood Longitudinal Study (Kindergarten Sample) supports the proposal that preschool broadly conceived—ranging in type and quality—may benefit children. Those who attended center-based programs in the year before kindergarten were, on average, one to two months ahead cognitively compared to children who did not attend such programs (controlling for other differences between the groups). These benefits are notably smaller than those found in children participating in extremely enriched programs, but are significant considering they account for up to a quarter of the children's learning in kindergarten. Moreover, these estimates refer to all children—both those with many advantages and those with none—and all types of programs—high- and low-quality. It may be that in high-quality programs, disadvantaged children experience greater gains.

Developmental Gains from Preschool Centers

Given the apparent benefits to children, and with some 65% of mothers with children aged five and under working outside the home, preschool has become increasingly popular (Ruhm, 2004). In recent years, policymakers have addressed the tenacious problem of low achievement among economically disadvantaged youth by developing preschool programs, particularly for children from poor families. Currently, Sacramento spends about $3 billion annually on a variety of early care and education programs for children, with about half paid directly to state

FIGURE 3: Care Arrangements the Year Before Kindergarten, by Ethnicity/Race in California



Source: Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 weighted by fall kindergarten child-parent-teacher weight (C1CPTW0)

preschool and center-based programs, and the other half going to parents in the form of vouchers (Hirschberg, 2002). These vouchers are to be used by parents to pay a child-care center or a babysitter, relative, or other child-care provider.

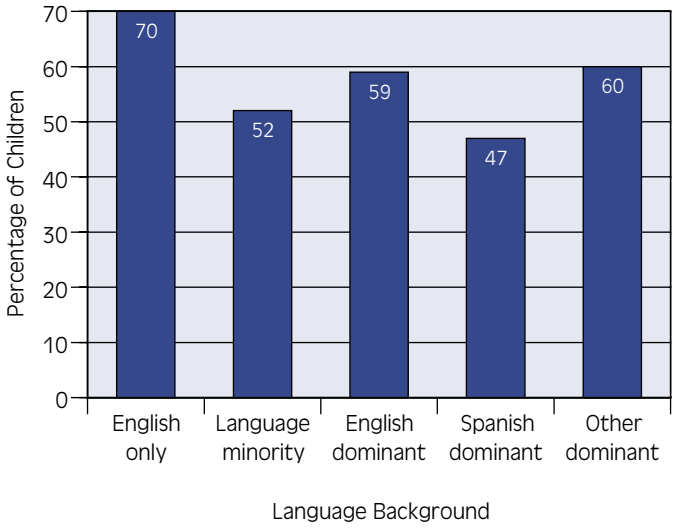
While there are quality regulations for state preschool, no such guidelines are in place to ensure that the voucher money from the state that is paid to babysitters, relatives, or other child-care providers is supporting high-quality care. Detractors claim that the state is facilitating the provision of low-quality care by subsidizing it through these voucher programs which lack quality guidelines.

But unless the quality of home-based care arrangement improves, funding through vouchers may inadvertently place disadvantaged children further behind their peers in school readiness and achievement. A variety of studies have shown that poor children are more likely to experience sustained cognitive gains after attending a center rather than a non-parental home-based arrangement (Burchinal, Peisner-Feinberg, Bryant, and Clifford, 2000; Hamre and Bridges, 2005; Howes 1997; Loeb, Fuller, Kagan, and Carrol, 2004). On the other hand, if high-quality care is available, vouchers allow parents to choose the arrangements they prefer. Admittedly, quality is differentially defined by parents. Well over half of federal voucher dollars are used by parents for center-based programs. Additional work is needed to integrate what is known about child development with parents' cultural values and preferences (Matthews and Ewen, 2006).

Whether by choice or out of necessity, parents are placing their children in a variety of types of non-parental care in the year before kindergarten, including relative care, non-relative care, and center-based care, which includes preschools, Head Start, and other centers. The use of these arrangements varies by ethnicity/race, home language, and socioeconomic status. Relative care includes grandparents, aunts, and uncles; non-relative care refers to babysitters, family child-care providers, or any non-related arrangement.

In the year before starting kindergarten, some 85% of African-American children are in center-based care arrangements, while only 50% of Latino children are. Relative care is most commonly used by Asian parents with 38% of their children being cared for by grandparents, aunts, and uncles; it is least common among whites (19%). In direct contrast, non-relative care is used by whites most (24%), and least likely to be used by Asian parents (5%).

FIGURE 4: Percentage of California Children in Center-Based Care the Year Before Kindergarten, by Language Background



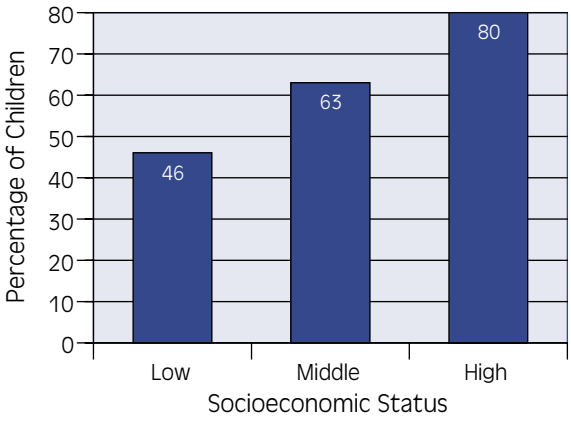
Source: Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 weighted by fall kindergarten child-parent-teacher weight (C1CPTW0)

Related to the ethnic/race break-down of child-care arrangements, the use of center-based care varies by language background. Of children whose home language is only English, 70% are in center-based care the year before kindergarten, as shown in Figure 4. While participation varies by language group, children from Spanish-dominant households are least likely to attend center-based care (47%).

In spite of financial supports for children from the lowest-income groups, many families are unable to afford preschool—particularly high-quality preschool. Child care is expensive, and the working poor are not eligible for subsidies yet they cannot pay for it themselves either. As shown in Figure 4, participation in child care is associated with family social class. Less than half (46%) of children from low-income families in California are enrolled in center-based care the year before starting kindergarten, compared with almost two-thirds of children from middle-income families, and 80% of children from high-income families. Given the benefits participation in center-based care provides to children from low-income families, discrepancies in access are problematic.

Recent history indicates that a broad achievement gap remains between children from low-income families and their counterparts in middle- and high-income families. This overlaps with ethnic/racial

FIGURE 5: Percentage of California Children Enrolled in Center-Based Care in the Year Before Kindergarten, by Socioeconomic Status



Source: Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 weighted by fall kindergarten child-parent-teacher weight (C1CPTW0)

achievement gaps: Black and Latino children start school significantly behind their Asian and white peers. Preschool appears to boost children's achievement, and may play an important role in decreasing the achievement gap, particularly for disadvantaged children. Broadening access to high-quality preschool would benefit children who may not otherwise qualify for subsidies or have the opportunity to attend.

EXPANDING ACCESS TO QUALITY CHILD-CARE OPTIONS

Most California youngsters participate in preschool prior to starting kindergarten; estimates vary from 61% (using ECLS-K data) to a recent RAND estimate of 65%. While these rates vary among particular groups, given the apparent benefits to children, there is a groundswell of support for making preschool available to more children in California. Several states, including Georgia, Oklahoma, Florida, and the Abbott Districts in New Jersey have even implemented universal preschool—with each state designing the program to meet its specific needs.

As options for preschool expansion are explored, several aspects of implementation demand further consideration. How programs would be further developed depends upon decisions made on a number of related issues, including 1) access and inclusion, 2) curriculum and philosophy, 3) language and culture, 4) teacher qualifications, 5) program financing, and 6) auspice and oversight.

Access and Inclusion

Given the generally high rate of participation of children in center-based programs the year before they start kindergarten, one basic question regarding preschool expansion is how it will change current enrollment rates. Participation is not equal across ethnicity, language, and SES subgroups—broadening access *may* redistribute enrollment. Family participation in preschool typically depends on financial resources, whether or not parents—in particular, mothers—are working outside the home, their neighborhood's resources and center capacity, as well as the family's ability to access those centers (Burchinal and Nelson, 2000; Kisker and Maynard, 1991). Even if preschool is free, financially disadvantaged families may have difficulties with transportation, language, or working "non-business" hours which render participation challenging.

Broadening access to preschool for children from low-income families, through outreach and the development of programs that meet their needs, is fundamental to preschool expansion. While preschool benefits all children, recent evidence indicates that extremely poor children may benefit the most (Burchinal et al., 1997; Loeb, et al., 2006; Magnuson, Ruhm, and Waldfogel, 2004)—and they most need the achievement boost. Ironically, because all children appear to gain by attending preschool, if preschool is made more available to all children, including those from affluent families as a universal program would do, greater access and participation may sustain the achievement gap.

Evidence is available for countering the gap by targeting low-income communities with preschool expansion. Recent findings indicate that longer-term, moderate exposure may maximize the benefits of preschool learning for children (Loeb, et al., 2005). Offering preschool to some three- *and* four-year-old children—namely, those from disadvantaged families—may be one way to prolong their exposure to preschool learning. While the second year of attendance offers slightly fewer gains to children relative to the first, longer exposure was beneficial and may help to reduce the achievement gap if offered to children from low-income families (Reynolds, 1995).

But how then can preschool expansion reach the most disadvantaged children? Depending on the funding and fees associated, expansion may facilitate more equal access to preschool for poor and working class families who previously have not been able

to afford it. Those children from the most disadvantaged families may have access to preschool through subsidized, public programs in their communities. Thus, participation appears to be relatively flat across lower social class groups, given that subsidies increase access for the most disadvantaged, and few working class families can afford expensive preschool fees. Preschool expansion could broaden access across these social class groups.

For working families, maternal employment leads to increased demand for child-care. National estimates indicate that 91% of four-year-old children whose mothers work attend preschool (National Household Education Survey, 1999). However, when faced with low-wage jobs, some mothers may opt to stay home with children, given their pay would be "cancelled out" by the high cost of potentially low-quality child care.

While preschool expansion could address concerns of financial feasibility for some families, there is also the question of access. Low-income neighborhoods have significantly fewer preschools than affluent neighborhoods, making it difficult for families to participate (Fuller, Waters Boots, Castilla, and Hirshberg, 2002). If preschools are not nearby, a lack of transportation may make attending preschool impractical, if not impossible. Supporting local infrastructure and developing more preschools in high-need neighborhoods is essential to expanding access.

Socioeconomic status tends to overlap with ethnicity and family home language. Latinos, who make up the largest ethnic group of California children, are least likely to use preschool. Moreover, among those Latino children whose home language is Spanish, only 47 percent attend preschool (Bridges, Rumberger, Fuller, and Tran, 2006). A host of reasons appears to explain this as noted above, including—but not limited to—family preferences related to having children cared for by family or by those who share their cultural values and language. Locating preschools in the community with staff who reflects the same background as the children served, may help Latino parents feel more comfortable about sending their children to local preschools.

Neighborhood-based preschools may also be more likely to cater to the specific needs of the community. For instance, many families who live in low-income neighborhoods are more likely to work long or "non-business" hours, which further complicates finding preschools that open earlier in the day or remain open later in the evening.

Broadening access and inclusion is complicated as evident in states with "universal" programs. Given that participation is not mandatory, states with universal programs have participation rates of 70% (Barnett, Hustedt, Robin, and Schulman, 2005). In California, some predict that a universal preschool policy would increase preschool enrollment rates from about 62% to as much as 80% (Fuller, in press). Such an increase in enrollment would likely to be accompanied by other dramatic changes in preschool education, such as which children are served and where, who teaches them and in what language, what they are taught, and who pays for these services.

Curriculum and Philosophy

Once children are brought into the preschool community, there are differing opinions about how they should spend their time and how their classrooms should be structured. Two of the primary approaches are DAP (developmentally appropriate practice) and direct instruction. The former proposes embedding learning into engaging, child-centered activities that address children's cognitive as well as social and emotional development. Direct instruction, in contrast, is more narrowly targeted on the skill development needed for kindergarten and beyond through structured academic activities. As teachers and schools feel the pressure to ensure that children meet the requirements set forth by the No Child Left Behind Act, the potential gains offered by starting academic skills early is tempting. In this vein, the California Department of Education has attempted to revise its pre-kindergarten quality standards to be more academically rigorous.

Evidence supports both approaches as beneficial to the cognitive development of children. DAP curriculum seems to encourage greater enthusiasm for learning among young students, which may facilitate later learning (Dunn and Kontos, 1997; Stipek et al., 1999; Stipek, 2005). Direct instruction appears to achieve slightly higher cognitive gains, but also increases children's stress levels (Stipek, 2005). Others who have examined whether a blended approach—making direct instruction more developmentally appropriate—could maximize gains found

that either approach implemented more purely was more effective than blending the two (Stipek, 2005). However, there was some evidence that a child-centered, developmentally appropriate practice curriculum better sustained benefits to children over time (Marcon, 2002).

Sustained effects are important in boosting achievement, and the benefits of many programs appear to dissipate by third grade (Rumberger and Tran, 2006). This phenomenon may be different for children in particularly high-quality preschool programs if they subsequently enter supportive and high-quality elementary schools. Consistency in curricular approach and philosophy has been found to be a driving factor in children's maintaining cognitive and social benefits gleaned in preschool (Stipek et al., 1999).

Language and Culture

In order for the preschool curriculum and philosophy to be effective with California's children, special consideration regarding language and culture is essential (Matthews and Ewen, 2006). The importance of continuity in language and culture has wide-reaching implications for California's diverse children. Given the high percentage of California preschoolers who live in non-English-speaking homes, many children arrive at preschool for their first substantive exposure to English (Bridges, Rumberger, Fuller, and Tran, 2006). Supporting children's home language development—whatever it is—has been shown to facilitate the acquisition of language and literacy in English (Snow, Burns, and Griffin, 1998).

Teachers who are able to communicate with their students—preferably in the student's home language—and provide continuity with family expectations in the social and behavioral demands they place on children, may be an important part of program quality (Wishard, Shivers, Howes, and Ritchie, 2003). These teachers may support their students in culturally appropriate ways that children consistently recognize and to which they respond. Less is known about how different cultural expectations and practices between home and preschool affect children, and their later academic achievement and social-emotional well-being.

Teacher Qualifications

Highly qualified teachers are needed to teach our preschool children—but what type of teacher education and training benefit children most? Generally speaking, teachers with more formal education are likely to provide the highest quality care to children (NICHD ECCRN, 2000). Yet, recent evidence indicates that teachers who have bachelor's degrees do not provide higher-quality care than teachers without, and their education is not consistently associated with any academic gains for their young students (Early et al., 2006). Careful examination of results from multiple programs in many different states supports this finding.

Some maintain that since B.A. degrees are required of other K-12 teachers, similar standards should be maintained for preschool teachers, regardless of whether a two-year degree would suffice. However, the preschool workforce is dramatically under-qualified for such requirements. Currently, only about one-third of preschool teachers possess bachelor's degrees, and that third tends to be concentrated in more affluent communities (Whitebook, Burton, and Young, 2002). Increasing the training of the rest of the workforce would require tremendous resources, and the community college infrastructure for training them does not currently exist. This fact was made clear when California counties recently implemented incentive programs to increase the training and retention of the early care and education work force, and coursework was not available or accessible to some teachers (Hamre et al., 2004).

Such formal education requirements attached to preschool expansion would necessitate tremendous preparation of teachers for B.A. degrees (Bellm, Burton, Whitebook, Broatch and Young, 2002). Most likely a majority of those preschool educators pursuing a B.A. would need to work full-time, and could only take a couple of classes per year. Recent evidence showed that a financial incentive program which paid preschool teachers to take unit-bearing coursework gained the average teacher about six units—or two courses—a year (Hamre et al., 2004). It would take most preschool workers years to complete their degree. Decidedly this is a slow route to developing a larger preschool work force.

The focus on teachers' formal education has eclipsed the most essential aspect of preschool quality: positive teacher-child interactions. Less is known about how to cultivate teachers who interact in highly responsive and nurturing ways that most benefit children. It appears that specialized training in child development—regardless of formal education—supports more sensitive and responsive care-giving among teachers and their young students (Burchinal, et al., 2002; Howes et al., 1992). This training may foster teacher's ability to provide consistent emotional support to preschoolers through responsive, caring behavior with regular feedback, teacher skills associated with the most gains for children (Pianta et al., in press; Peisner-Feinberg et al., 2006).

Financing Preschool Expansion

The funding of preschool expansion could be conducted through the state education budget, as proposed by the governor. Preschool—as most families know—is expensive and targeting its expansion to particular children and communities may make it not only more feasible, but make it a viable proposal. With limited resources, some propose that preschool should be expanded and offered to families on a sliding scale, subsidizing only those families who are unable to pay. This is how Georgia—the nation's pioneer in providing universal preschool—began its program. Texas has aggressively expanded preschool and still requires better-off families to pay fees. The money could be focused on extending the preschool care and services offered to children from disadvantaged families who stand to gain the most.

Other states with more extensive preschool programs have taken different approaches, although most have adopted policies that address the neediest children first and/or offer them more resources. The universal preschool program in Georgia offers preschool on a sliding scale. Oklahoma provides higher per child reimbursement for children with special needs and English-language learners which, in effect, provides more resources to lower-income preschool programs.

Including middle- and upper-income families in preschool program expansion may facilitate the development of high-quality preschool programs, but creative solutions are needed to avoid disenfranchising low-income families. Otherwise, this well-meaning program could exacerbate the very problem it is designed to address—the existing achievement gap between low-income and other students.

Policymakers should not forget that state and federal agencies already spend over $3.7 billion annually on public child care and preschool, including California's share of the federal Head Start program (Fuller, Bridges, and Livas, 2005; LAO, 2005). On top of this maze of programs, several counties are now building "universal" preschool programs. Various child-care groups might come to see their shared interest in consolidating—and simplifying points of entry for parents—this array of funding streams as they seek additional funding.

Who Should Run Preschools?

Debate persists about where preschool should be housed. The public school system may hold appeal in terms of centralizing and coordinating education for children, regardless of their age, offering economies of scale, and having an infrastructure for employing the necessary staff. Yet many community-based organizations have effectively developed preschool programs over the past century throughout California. About 70% of four-year-olds presently attending preschool attend a community program, not a preschool situated in the public schools. Moreover, three-fifths of all California preschoolers attend a center that's fully supported through parental fees, not public funding (PACE, 2006).

Most research indicates that children appear to reap commensurate benefits regardless of where a preschool program is housed or who runs it—whether it is a school district or a nonprofit. For example, in Georgia's UPK program, children attending non-school district programs actually performed better than their peers participating in school-district preschools (Henry and Gordon, 2006). In New Jersey, researchers found no significant differences between children's preschool gains, based on where the program was housed (Resnick et al., 2002).

The key to designating the location of preschool programs may lie in establishing quality standards that support the development of a mixed system of quality preschools that reach the communities they intend to serve. Such a system could provide the flexibility that many parents need, while not sacrificing the benefits preschools can offer children.

ADDRESSING LONG-TERM ISSUES

While the benefit of preschool for all children is notable, reducing the achievement gap is fundamental. Preschool can only reduce the achievement gap if more low-income children participate in high-quality preschool programs, or if they receive greater benefits than middle-income children. While the differential benefits of preschool across income groups may bear out—with low-income children exhibiting greater cognitive gains than their more affluent peers—there are other ways to improve the school readiness and performance of low-income children. Some children might be enrolled in kindergarten one year later, giving them a chance to mature cognitively, socially, and emotionally. Preschool programs could be offered to three-year-olds or extended to full-day programs to give children a longer "exposure" to preschool. Extending programs during the summer may provide more substantial benefits to children, providing a preschool experience that is consistent, moderate, and sustained.

RECOMMENDATIONS

Based on the most current research, we offer the following recommendations for implementation of preschool expansion in California:

- Simplify the existing $3.7 billion in current programs. One approach would be for Sacramento to fund one parent voucher effort and one high-quality preschool program. Regulatory relief around the federal Head Start program could allow further integration of these centers into a single state-coordinated network.

- Target public dollars first on those children who we know benefit most from quality child care and preschool: youngsters from low-income families. At the same time, we must recognize that thousands of lower middle-class families confront the most scarce availability of affordable preschool centers, and need assistance in participating, too.

- Extend care to low-income three-year-olds for long-term exposure. Provide full-day programs with longer hours for families who need them. Develop new preschools in the neighborhoods where low-income families live.

- Conduct additional research to identify what preschool inputs, teacher qualities, and classroom practices are most effective in advancing quality and child development across diverse populations.

- Develop preschool programs that truly respect and involve parents in defining the goals of local child care options, including preschools. Pre-literacy skills and the understanding of mathematical concepts are essential in terms of success in elementary school. But the broader motivation and eager desire to learn in group settings require inventive, developmentally appropriate classroom practices with well-prepared teachers. Early educators must also think more carefully about the continuity that children do, or fail to, experience between their homes and preschools.

- Provide better training for diverse, qualified teachers. Recent evidence points to the utility of requiring child-care providers to obtain a two-year degree in child development. The state, if serious about improving quality, must expand training incentives and more flexible college programs, building on the lessons learned in earlier First 5 California training experiments.

- Develop sustained and adequate financing of child care and preschool options, with a stronger and carefully crafted role for Sacramento. Including preschool expansion in wider legislation to reform the financing of the K-12 school system is advisable. At the same time, the state department of education has learned much about how to fund both community- and school-based preschool programs. The integration of myriad programs can be aided by county-level agencies, but the legislature and governor could lead

this consolidation and simplification effort, moving toward a single child care voucher program and a single preschool center program.

REFERENCES

August, D., & Hakuta, K., Eds. (1997). *Improving Schooling for Language Minority Children: A Research Agenda*. Washington, D.C.: National Academy Press.

Barnett, S. (1995). Long-term effects of early childhood programs on cognitive and school outcomes. *The Future of Children, 5*, 25-50.

Barnett, W. S., Hustedt, J. T., Robin, K. B., & Schulman, K. L. (2005). *The state of preschool: 2005 state preschool yearbook*. The National Institute for Early Education Research.

Bates, J. E., Marvinney, D., Kelly, T., Dodge, K. A., Bennett, D. S., & Pettit, G. S. (1994). Child care history and kindergarten adjustment. *Developmental Psychology, 30*, 690-700.

Belsky, J. (2001). Developmental risks (still) associated with early child care. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 42*, 845-859.

Burchinal, M. R., Campbell, F. A., Bryant, D. B., Wasik, B. H., & Ramey, C. T. (1997). Early intervention and mediating processes in cognitive performance of children of low-income African-American families. *Child Development, 68* (5), 935-954.

Burchinal, M.R., & Nelson, L. (2000). Early Childhood Research Quarterly,. 15, 385-412.

Bridges, M., Fuller, B. C., Rumberger, R., & Tran, L. (2004). Preschool for California's children: Promising benefits, unequal access. *PACE Policy Brief, 04-3*, Berkeley, CA: Policy Analysis for California Education (PACE).

Brooks-Gunn, J. (2003). Do you believe in magic? What we can expect from early childhood intervention programs. *SRCD Policy Brief, 17.*

Campbell, F.A., & Ramey, C.T. (1994). Effects of early intervention on intellectual and academic achievement: A follow-up study of children from low-income families. *Child Development* 65, 684-698.

Campbell, F. A., & Ramey, C. T. (1995). Cognitive and school outcomes for high-risk African-American student at middle adolescence: Positive effects of early intervention. *American Educational Research Journal, 32*, 743-772.

Campbell, F. A., Ramey, C. T., Pungello, E. P., Miller-Johnson, S., & Sparling, J. J. (2002). Early childhood education: Young adult outcomes from the Abecedarian Project. Applied Developmental Science, 6, 42-57.

Cooper, S., & Dukakis, K. (2004). *Kids can't wait to learn: Achieving voluntary preschool for all in California*. Oakland: Preschool for All.

Currie, J. (2001). Early childhood intervention programs: What do we know? *Journal of Economic Perspectives, 15*, 213-238.

Currie, J., & Thomas, D. (2000). School quality and the longer-term effects of Head Start. *Journal of Human Resources, 35*, 755-774.

Currie, J., & Thomas, D. (2001). Early test scores, socio-economic status, school quality and future outcomes. *Research in Labor Economics, 20*, 103-132.

Early, D.M., Bryant, D.M., Pianta, R.C., Clifford, R.M., Burchinal, M.R., Ritchie, S., Howes, C., & Barbarin, O. (2006). Are teacher's education, major, and credentials related to classroom quality and children's academic gains in pre-kindergarten? *Early Childhood Research Quarterly, 21*, 174-195.

Fryer, R., & Levitt, S (2004). "Understanding the Black-White Test Score Gap in the First Two Years of School," *The Review of Economics and Statistics*, May.

Fuller, B., with Bridges, M., & Pai, S. (in press) Standardized Childhood: The Political and Cultural Struggle over Early Education. Stanford University Press.

Fuller, B., & Huang, D. (2003). Targeting investments for universal preschool: Which families to serve first? Who will respond? *PACE Working Paper, 03-1*, Berkeley, California: Policy Analysis for California Education (PACE).

Fuller, B., Livas, A., & Bridges, M. (2005). How to expand and improve preschool in California: Ideals, evidence, and policy options. *PACE Working Paper 05-1*. Berkeley, California: Policy Analysis for California Education (PACE).

Garces, E., Thomas, D., & Currie, J. (2002). Longer term effects of Head Start. *The American Economic Review, 92*, 999-1012.

Hamre, B., & Bridges, M. (in review). Early care and education staff preparation, quality, and child development: A review of the literature.

Hamre, B., Grove, R., O'Brien, B.C., Lu, F., Bridges, M., & Pai, S. (2004*). Program Evaluation: Matching Funds for Retention Incentives for Early Care and Education Staff: Final Report: 2001-2004*. Berkeley, CA: University of California, Policy Analysis for California Education.

Heckman, James (2000). "Policies to Foster Human Capital," *Research in Economics*, 54(1), 3-56

Heckman, J., Ichimura, H., & Todd, P. (1998), 'Matching as an econometric evaluation estimator', *Review of Economic Studies 65*, 261—294.

Hirschberg, D. (2002). *CDSS-PACE Child care planning project—Final report*. Berkeley: University of California, Policy Analysis for California Education (PACE).

Hofferth, S., Shauman, K., Henke, R., & West, J. (1995). *Characteristics of Children's Early Care and Education Programs: Data from the 1995 National Household Education Survey*. Washington, D.C.: National Center for Education Statistics.

Howes, C. (1997). Children's experiences in center-based child care as a function of teacher background and adult: child ratio. *Merrill-Palmer Quarterly, 43*, 404-425.

Jencks, C., & Phillips, M. (1998). *The Black-White Test Score Gap*. Washington, D.C.: Brookings Institution.

Kisker, E., Hofferth, S., Phillips, D., & Farquhar, E. (1991). *Profile of Child Care Settings: Early Education and Care in 1990.* Washington, D.C.: United States Department of Education.

Kisker, E. & Maynard, R. (1991). Quality, Cost, and Parental Choice in Child Care.' In Blau, David (ed) *The Economics of Child Care*. New York: Russell Sage Foundation.

Liang, X., Fuller, B., & Singer, J. (2000). Ethnic differences in child care selection: The influence of family structure, parenting practices, and home language. *Early Childhood Research Quarterly, 15*, 357-384.

Loeb, S., Bridges, M., Bassok, D., Fuller, B. C., & Rumberger, R. (2006). How much is too much? The effects of duration and intensity of child-care experiences on children's social and cognitive development. *Economics of Education Review*.

Loeb, S., Fuller, B., Kagan, S. L., & Carrol, B. (2004). Child care in poor communities: Early learning effects of type, quality, and stability. *Child Development, 75,* 47-65.

Magnuson, K. A., Ruhm, C. J., & Waldfogel, J. (2004). Does pre-kindergarten improve school preparation and performance? *National Bureau of Economic Research Working Paper 10452*. Cambridge, MA: NBER.

National Center for Educational Statistics (1998). *User's Manual for the ECLS-K Base Year Public-Use Data*. Washington, D. C.: US Department of Education, Office of Educational Research and Improvement.

NICHD Early Child Care Research Network. (2003). Does the amount of time spent in child care predict socioemotional adjustment during the transition to kindergarten? *Child Development, 74*, 976-1005.

O'Brien-Strain, M., Moye, L., & Sonenstein, F. L. (2003). *Arranging and Paying for Child Care*. San Francisco, California: Public Policy Institute of California.

Reardon, S. (2003). Sources of educational inequality: The growth of racial/ethnic and socioeconomic test score gaps in kindergarten and first grade. State College, PA: Penn State University (Manuscript).

Reynolds, A. J., Temple, J. A., Robertson, D. L, & Mann, E. A. (2001). Long-term effects of an early childhood intervention on education achievement and juvenile arrest: A 15 year follow-up of low-income children in public schools. *Journal of the American Medical Association, 285*, 2339-2346.

Ruhm, C. J. (2004). How well do parents with young children combine work and family life. In S. M. Bianchi, L. M. Casper, and R. B. King (eds.), *Work, Family, Health, and Well-Being*. Mahwah, NJ: Lawrence Erlbaum Associates.

Rumberger, R. W., & Arellano, B. (2003). *Understanding and Addressing the Latino Achievement Gap in California.* Draft Report submitted to the Latino Policy Institute, California Policy Research Center, University of California.

Shonkoff, J. P., & Phillips, D. A., Eds. (2000). *From Neurons to Neighborhoods: The Science of Early Child Development*. Washington, D.C.: National Academy Press.

Smith, T., Kleiner, A., Parsad, B., Farris, E., & Green, B. (2003). Pre-kindergarten in the U.S. Public Schools. Washington, DC: U. S. Department of Education, National Center for Education Statistics.

Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing Reading Difficulties in Young Children*. Washington, DC : National Academy Press.

U. S. Department of Education, National Center for Education Statistics. (2003). *The Condition of Education*. Washington, D.C.: U.S. Government Printing Office.

Waldfogel, J. (2002). Child care, women's employment, and child outcomes. *Journal of Population Economics, 15*, 527-548.

Wertheimer, R., Croan, T., Moore, K. A., & Hair, E. C. (2003). Attending kindergarten already behind: A statistical portrait of vulnerable young children. *Child Trends Research Brief, 2003-20*. Washington, D.C.: Child Trends

CHAPTER 10

Rekindling Reform

Bruce Fuller
Policy Analysis for California Education

CALIFORNIA EDUCATORS AND POLICYMAKERS DESERVE HEARTY PRAISE FOR WHAT THEY HAVE ACCOMPLISHED IN RECENT YEARS. AS OUR CONTRIBUTORS HAVE DETAILED, SACRAMENTO HAS ESTABLISHED CLEAR LEARNING OBJECTIVES, NOW ALIGNED WITH INSTRUCTIONAL MATERIALS AND STANDARDIZED TESTS. Despite the ups and downs of school funding, student learning has accelerated in elementary grades. Modest yet discernible responses to standards-based accountability have been felt in middle schools across the state, especially in students' math performance.

But earlier chapters also point to aspects of the state's public education system where much work remains. Test score growth has faded over the past two years, achievement gaps between children from poor and middle-class families have failed to narrow, and almost one third of California teenagers will never receive a high school diploma (Greene & Winters, 2006). Sacramento has been eager to erect a high-standards, high-stakes educational system. But state policymakers have shown less determination to address the feeble structure of funding streams that props up the public schools. This cuts into the morale and efficacy of local school boards and principals who are struggling to serve an evolving mix of children and families. California is the 11th richest state in the nation in terms of per capita income; we rank 31st when it comes to spending per pupil.

Perhaps the most crucial issue facing the California schools is whether the current state reform strategy will sustain the achievement growth we have seen since 1999 in the elementary grades and ever reach the high school. The pressing tasks in coming years include a careful rethinking of school finance and a more motivating approach to accountability.

The timing couldn't be better. The California economy has bounced back, notwithstanding the state's structural deficit. A new gubernatorial term is getting under way, and a fresh legislature will soon begin work. The governor's high-ranking education commission will be reporting out more than a dozen studies on efficiency and finance adequacy, along with a sketch for long-term institutional reform. The Congress and President will be reviewing, and perhaps improving, the No Child Left Behind Act.

Regaining Momentum to Motivate Learning

To rekindle the spirit and local efficacy of school reform, the analyses you have just read suggest that policymakers and educators might pursue four basic priorities:

- Reorient school accountability and funding to improve schools that serve the lowest-performing students.
- Develop a coherent strategy for raising the achievement of English learners.
- Make school finance simple, transparent, and adequate for a high-standards school system.
- Decentralize authority by building district capacity, freeing principals to deploy resources to instruction, and focusing state responsibility on tracking and rewarding performance.

The original policy theory behind standards-based reform—back in the 1980s—was that states would articulate clear learning objectives and finance a fully professional teaching force. Then, local districts and school principals would be given greater freedom to redeploy resources to instructional improvement efforts. In California, however, policymakers micromanage: limiting the textbooks and materials teachers can use; narrowing the curriculum; tying up almost one third of school spending on highly regulated categorical aid. No private firm would centralize every operation and technology in this way—then expect that their best and brightest employees would remain in such an un-professionalized workplace.

Our four-point reform agenda emphasizes a pair of conceptual thrusts. First, an accountability and finance system that fails to close achievement gaps will make California's society even less fair, by awarding opportunities only to some. Second, the state's heavy reliance on rules, set in Sacramento (and Washington), will fail to create motivating and professional workplaces for local educators. Tough love may yield short-term gains. But the long-term challenge is to attract and retain quality teachers.

POLICY SHIFT 1

Reorient School Accountability and Finance to Boost Low-Performing Students

Under Sacramento's current reform program, achievement gaps have failed to narrow. This is a formula for creating a divided society, with a gaping rift that separates rich Californians from the poor. Policymakers have made attempts to fix the problem. Two intervention programs, described in prior chapters, have targeted dollars to low-performing schools. Initial evaluation results are not encouraging: districts often fail to allocate dollars to instructional improvements; this type of short-term aid is inadequate to attract (and retain) a stronger teaching force; and school site councils scatter dollars based on multiple demands.

One structural problem—worsened by NCLB's problematic way of determining which schools are deemed "failing"—is that hundreds of schools and 152 districts are beginning to be hit by sanctions, as student growth targets don't keep pace. Parents and policymakers do need to know which districts are progressing and which are not. But the current accountability systems are long on sanctions and short on the means to build district capacity. As our authors have suggested, improvement efforts would more likely take hold if interventions *targeted a select number* of low-performing schools and stretched funding and technical assistance *over a longer period of time*.

We also see the need for more careful state-local strategies. This will require a thoughtful revision of NCLB in Washington to free Sacramento to focus more carefully. And, if we are serious about helping these schools, more resources will be needed, especially to attract more able school managers and stronger teachers. Assembly Bill 172, backed by Governor Schwarzenegger, exemplifies legislation that targets interventions on children most in need. The law will focus new preschool dollars on communities with low-performing schools.

Unlike the original PSAA policies, the Legislature has shown growing interest in progressively targeting dollars on students most in need. In the summer of 2006 lawmakers— backed by major education groups—decided to focus an additional $2.9 billion

on low-performing schools.[1] It was a mistake to tie up most of the dollars in reducing class sizes—which yields achievement gains only under certain conditions. Alternative strategies should be tried and their effectiveness compared.[2] But the progressive focus on schools serving low-performing students is an important precedent.

Superintendent Jack O'Connell is right to lobby Washington to change NCLB so that schools are rewarded when they spark achievement growth. NCLB, as presently structured, unfairly penalized schools serving poor children, largely because they start toward the bottom of the staircase leading to "universal proficiency," mandated by NCLB. Schools in better-off communities started more than half way up the staircase, and the steps they must climb each year are less steep. When a public policy allows children in well-off families to pull farther and farther ahead of the most disadvantaged children, it discourages opportunity and motivation.

POLICY SHIFT 2

Develop a Coherent Strategy for Raising the Achievement of English Learners

As Thomas Timar points out in Chapter 5, "The main policy question…is not how to fix low-performing schools, but what state policy can do for schools that serve large numbers of educationally and economically disadvantaged students." Remember that one in five California students lives in a low-income household.

Closely related is the fact that more than a quarter of California's students are English learners (1.6 million). Providing them with an education that meets their learning needs requires, at minimum, qualified teachers and an effective curriculum (including materials).

Policymakers have advanced a number of commendable measures to support English learners. The California English Language Development Test (CELDT) was first administered in 2001-02; English language development standards were adopted in 1999; and California teachers may pursue two supplemental credentials certifying expertise in EL instruction.

However, research from the field, including extensive teacher surveys, reveal a chasm between what our current teacher workforce can provide and what English learners need to reach proficiency targets. As the authors of Chapter 7 point out, policies aimed at better preparing teachers for diverse learners must consider recruitment strategies and the limited capacity of teacher training colleges.

While results of the CELDT show increasing numbers of English learners are achieving fluency, these results do not correlate to success on the California Standards Test in English Language Arts. Furthermore, research affirms that "one size does not fit all" in educating our diverse student population. This year, in a heated debate over instructional materials for English learners (SB 1769), lawmakers argued over requiring textbook publishers to provide supplementary material for English learners while giving districts choice in purchasing materials. A recent study by the American Institutes for Research finds that districts benefit from more options in addressing their EL needs.[3] The bill was vetoed on grounds that it would further "segregate" Californians.

We encourage policies that support our schools in supplementing core curriculum to meet the needs of language learners, in building teacher capacity to reach California's unique student body, and in tracking demographic shifts. Students living in poverty and those learning English are not isolated to urban centers. We must also study the effects of the California High School Exit Exam on student motivation and drop out rates among English learners and students living in poverty.

Earlier chapters detailed the widening linguistic diversity of California's children and how many enter kindergarten already behind in their cognitive and language development. Rising public interest in expanding preschool opportunities —especially for youngsters from poor and blue-collar families—is one encouraging sign. More broadly, the principle here is to enrich young children's learning environments, and this necessarily involves adequate teacher training, more effective pedagogical practices, and more respectful, more engaging relationships between parents and educators over time.

POLICY SHIFT 3

Make School Finance Simple, Transparent, and Adequate for a High-Standards School System

It's certainly cheaper to push local educators to work harder or teach with a simpler curriculum than to finance stronger teacher salaries, attract stronger rookie teachers, or enrich instructional materials. Again, the fundamental policy dilemma is that Sacramento has succeeded in creating a high-standards, high-stakes accountability system while failing to provide sufficient resources to ensure that every classroom delivers an equal opportunity to learn.

Early next year the governor's Committee on Education Excellence will deliver an array of new studies that delve into aspects of school finance, the efficiency of public schools, and improving the ways and means by which more than $50 billion is spent on K-12 education each year. We are hesitant to put forward specific recommendations in this arena beyond urging policymakers to carefully examine the reports.

The analyses offered in this volume, however, do suggest two key principals might guide school finance reform. California's method for financing education and distributing dollars to districts, and then to schools, should become fully transparent and simpler. There's a not-so-funny joke in Sacramento that only about five people in the state capital fully understand the thick statutes that structure the Byzantine funding system. In contrast, states like Oklahoma and Texas have fairly simple allocation formulae, weighting students by specified needs and associated costs. A curious citizen or journalist can quickly learn how dollars flow to local districts.

In California, even veteran legislators don't understand how school finance works. This places them at the mercy of special interests that want to tinker to a get a bit more equalization aid or a few more textbooks. Public support could only grow for a reformed finance system that was easily explained and which seemed more fair.

Progress is being made to be able to track the learning patterns of students over time, even when they move from one school to another.[4] This is an analytic piece to a fundamental puzzle: figuring out which education investments actually yield growth in achievement. Despite the billions of dollars spent each year for Sacramento's more than 60 categorical aid programs, no way exists to evaluate the relative benefits of these proliferating programs. Even after fighting to consolidate these funding channels into simpler block grants, say, for low-performing students or for teacher development, there are lawmakers newly advancing a bevy of specialized programs. Here again, silver bullets are cast in Sacramento, yielding unknown effects for students and further restricting the capacity and flexibility of local educators and elected school boards.

POLICY SHIFT 4

Focus the State's Responsibility, Deregulate with Accountability

Local educators continue to be pressed to raise student achievement with diminishing control over fungible resources inside schools. Sacramento should revisit the original model of school accountability borrowed from innovative firms in the 1980s. A growing number of companies were pushing to focus central managers on defining quality and character of the end product, then granting local managers and professionals more discretion to figure out how to apply resources to boost performance.

This new view of management which emphasizes centrally determined outcomes but locally crafted remedies provided the cornerstone of what came to be called systemic or standards-based reform (Cohen, 1990; Smith & O'Day, 1991; Fuller et al., 2006). But somewhere along the way Sacramento decided to regulate student outcomes and the inputs and teaching tools that local educators are now required to use. And the rules around accountability were layered on top of the rules that come with categorical aid programs. So, urban school principals are forced to become bookkeepers and rule keepers, rather than instructional leaders. And for all the rhetoric from Sacramento about aiding districts in the quest to strategically strengthen teaching and learning, the proliferation of rule-bound categorical aid has again increased in recent years.

Sacramento is beginning to focus on the capacity of local districts to address achievement shortfalls.

This is an encouraging trend. We applaud the state department of education's initial strategy for helping districts with growing numbers of low-performing schools.[5] School districts and county offices of education play a key role in leveraging reforms to improve student achievement. District capacity varies when it comes to interpreting and implementing policy.

A new PACE report details how three diverse districts are effectively closing achievement gaps, crafting quite different strategies (Wood, et al., 2006). Researchers at the American Institutes for Research are leading a new district collaborative, convening state policymakers, researchers, and innovative district leaders. The legislature also is focusing on district capacity, for example, through AB 2109, enacted this year, which requires districts receiving professional development funds to focus those learning opportunities on closing achievement gaps. Many school districts have successfully closed disparities in the share of children who reach proficiency in reading and mathematics. For instance, 52% of California districts, reporting complete data between 2002 and 2006, did narrow the disparity in the share of Latino versus white fourth-graders deemed proficient in language arts, closing the gap by almost three percentage points on average.

School principals have lost considerable authority over resources. Yet centralization has failed to close achievement gaps and may even threaten the everyday commitment and motivation of local educators. Under the original model of state-led accountability, principals were to gain more authority, so that fungible resources could be deployed based on a grassroots understanding of the barriers to instructional improvement. Simple and transparent school finance mechanisms could move dollars to principals in accountable ways. All the regulations and rules surrounding categorical aid has created thousands of jobs in district offices with little evidence of effectiveness inside schools. A better way can be found to free-up principals to lead with more controllable resources, while still holding them accountable to raise student performance.

Careful financing of innovative forms of schooling is advisable, along with more rigorous evaluation of what's working and for which students. Early results from charter schools are mixed yet positive overall. The RAND evaluation found that students in charter schools keep pace with pupils in neighboring public schools at a lower cost. The jury is still out on "small schools." Little is known about the rising public investment in career academies and other innovative structures within high schools. But government should continue to experiment, adequately fund these innovations, and then rigorously assess their comparative performance.

The Risk of Complacency

One thing that Sacramento policymakers should not do is rest on their laurels. It's natural that policymakers who fought hard to create the present accountability system would continue to defend it. Other equally forceful groups continue to nibble on the edges of these policies, hoping to reduce the amount of student testing or lower the bar for what we are expecting students to master. But California's present accountability system is yielding diminishing gains. We shouldn't throw out the baby. But the bath water is looking quite murky.

The analysis contained in early chapters, on balance, suggests that the basic contours of Sacramento's accountability program are serving students well. But it would be unfortunate if the architects of the Public School Accountability Act remained stuck in 1999. The challenge is to build from recent policy success. The real and pressing risks are that achievement gaps will continue to grow, achievement will plateau, and high school students will not benefit from reform, jeopardizing California's future.

In this context, the defenders of current policy might come together with its critics in the new legislative session—seeking to craft a thinner set of centralized rules without lowering expectations or standards. Both sides might ask what policy conditions could better attract bright, idealistic college graduates into workplaces that are becoming more professional, less hog tied from above. How we adjust the balance between rules and resources to enrich the work lives of teachers is a pressing issue. Tough love may have its place in politics. But nurturing the motivation and efficacy of teachers and students alike is the long-term challenge facing policymakers. A system that's now long on rules and short on resources is unlikely to sustain motivating reform.

ENDNOTES

[1] SB1133 was signed after an adjustment to funding.

[2] See class size reduction in Chapter 1. *The status of the teaching profession 2005,* published by the Center for Teaching and Learning, details the continuing shortage of quality teachers. Further reductions in class size will require an even greater supply.

[3] Parish, T., Linquanti, R., & Merickel, A. (2006) *Effects of the implementation of Proposition 227 on the education of English Learners.* Menlo Park: American Institutes for Research.

[4] The California Longitudinal Pupil Achievement Data System (CALPADS) is scheduled to be in place by 2008.

[5] The California Department of Education's improvement guidelines, the *Nine Essential Program Components,* and its District Intervention and Assistant Team (DAIT) program are examples of how Sacramento can provide leadership in partnering with districts to strengthen low-performing schools.

REFERENCES

Center For Teaching and Learning. (2006). *The status of the teaching profession 2005.* Santa Cruz, CA: Center for Teaching and Learning.

Civil Rights Projects. (2005). *Confronting the graduation rate crisis in California.* Cambridge, MA: Harvard University. Online at www.civilrightsproject.harvard.edu.

Cohen, M. (1990). Key issues confronting state policymakers. In R. Elmore (Ed.), *Restructuring schools: The next generation of educational reform* (pp. 251-288). San Francisco: Jossey Bass.

Fuller, B., Gesicki, K., Kang, E., & Wright, J. (2006). *Is the No Child Left Behind Act Working? The reliability of how states track achievement.* PACE Working Paper Series No. 06-1. Berkeley, CA: Policy Analysis for California Education (PACE).

Gándara, P., & Maxwell-Jolly, J., & Driscoll, A. (2005). *Listening to teachers of English learners: A survey of California teacher challenges, experiences, and professional development needs.* Santa Cruz, CA: Center for Teaching and Learning.

Greene, J., & Winters, M. (2006). *Leaving boys behind: Public high school graduation rates.* Civic Report No. 48. New York, NY: Manhattan Institute for Policy Research.

Smith, M., & O'Day, J. (1991). Systemic school reform. In S. Fuhrman & B. Malen. (Eds.), *The politics of curriculum and testing: The 1990 yearbook of the politics of education association* (pp. 233-267).

Woody, E., Bae, S., Park, S., & Russell, J. (2006). *Snapshots of reform: District efforts to raise student achievement across diverse communities*. Berkeley, CA: Policy Analysis for California Education (PACE).

Contributors

CATHERINE BITTER is a Senior Research Analyst at the American Institutes for Research in Palo Alto, California. Ms. Bitter served as the Project Manager and Project Director respectively for the independent Evaluation Studies of the Immediate Intervention/Underperforming Schools Program (II/USP) of the Public Schools Accountability Act (PSAA) of 1999 for the California Department of Education, completed in 2003 and 2005. She is also assisting with AIR's independent evaluation of California's High Priority Schools Grant Program (HPSGP).

MARGARET BRIDGES is the research director of Child Development Projects at Policy Analysis for California Education (PACE). Currently, she is examining the implications of expanding preschool access, and assessing the ramifications for Latino preschool children and their families. Dr. Bridges completed her doctoral and postdoctoral training in child development, studying family, school, and neighborhood effects on children's outcomes.

JAY G. CHAMBERS is a senior research fellow and a managing director of the Education Finance Business Development Group at the American Institutes for Research (AIR). Dr. Chambers is an expert in school finance and education cost analysis. Over the past 30 years, he has directed and been involved in many national-, state-, and local studies related to programmatic and resource costs in education, and has written and conducted projects with local, state, and federal partners to improve the quality of fiscal and cost information for school decision making.

BRUCE FULLER is professor of education and public policy at the University of California, Berkeley. Trained in sociology and education policy at Stanford University, Fuller helped to staff the Assembly Education Committee and later served as an education adviser to Governor Jerry Brown. He worked as a research sociologist at the World Bank before teaching at Harvard University. He currently co-directs Policy Analysis for California Education (PACE). His new book, *Standardized Childhood: The Political and Cultural Contest over Early Education*, will be published by Stanford University Press in 2007.

PATRICIA GÁNDARA has directed education research in the California Legislature (1985-87), and has been a Commissioner for Postsecondary Education in California (1981-86). She currently is Professor of Education at the University of California, Davis where she is also Director of CAP-Ed (Center for Applied Policy in Education) and Associate Director of the UC Linguistic Minority Research Institute. She has authored and co-authored a study of 5300 teaches in CA *Listening to the Voice of Teachers of English Learners,* as well as *English Learners in California Schools, Unequal Resources, Unequal Outcomes* and *Learning English in California: Guideposts for the Nation.*

HALEH HATAMI is a writer and has conducted education policy research and provided technical assistance to schools in Oregon, North Carolina, and California. She has worked on local, state, and federal school improvement initiatives, including school needs assessments, and has co-authored articles on school-based budgeting, leadership coaching, and improvement planning. At PACE she coordinates a seminar series for legislators and staff on a range of education policy topics. She served as managing editor for *Crucial Issues 2006.*

MELISSA HENNE served as Assistant Research Scientist at Policy Analysis for California Education (PACE) where she worked in the Elementary/Secondary Education division. Henne has been involved in several projects, including case studies of effective districts and educators' responses to state accountability. Prior to coming to PACE, Henne was a project coordinator at the New York State Education Department, were she assisted in the implementation of the School Quality Review Initiative (SQRI). Previously, she taught eight-grade English and Social Studies in New York City. She is currently studying at University of California at Berkeley Graduate School of Education.

Contributors

JESSE D. LEVIN is a Senior Research Scientist for the Education Program at the American Institutes for Research (AIR). He conducts research on educational production, finance and adequacy. He has served as Deputy Project Director and Principal Analyst on the New York Adequacy Study. Currently, he serves as Project Director for The Cost of Comprehensive High School Reform.

JULIE MAXWELL-JOLLY began her career as a Spanish bilingual teacher. Since leaving the classroom more than twenty years ago she has continued to work on English learner and immigrant student issues. She was the first Linguistic Minority Research Institute's post-doctoral fellow in 2001 and currently works as a Senior Research in the UC Davis School of Education. Most recently she has participated in conducting and designing research on the preparation of teachers for working with English language learners, the experiences of Latino students in the California Community College system, and an in-depth district level study of programs and outcomes for English learner students.

JENNIFER O'DAY is a Managing Research Scientist and policy analyst in the Education Program of the American Institutes for Research. Dr. O'Day has carried out research and written extensively in the areas of systemic standards-based reform, educational equity, and capacity-building strategies. Dr. O'Day's has served as Principal Investigator/Project Director for a series of national, state, and district studies, covering such topics as Title I accountability under both IASA and NCLB, the implementation and effects of California's Public School Accountability Act of 1999, and district interventions in low performing schools in Chicago and San Diego. Dr. O'Day is currently leading a four-year investigation of the effects of site-based leadership and professional learning opportunities on instructional practices and student achievement in San Diego City Schools.

LAWRENCE O. PICUS is a Professor at the University of Southern California Rossier School of Education. He also serves as the director of the Center for Research in Education Finance (CREF), a school finance research center housed at the Rossier School of Education. His current research interests focus on adequacy and equity in school finance as well as efficiency and productivity in the provision of educational programs for K-12 school children. Picus is past-president of the American Education Finance Association. In addition to authoring numerous publications on the subject, he has consulted extensively on school finance issues with more than 20 states, and conducted adequacy studies in Arkansas, Arizona, Kentucky, Wyoming, and Washington.

LESLIE SANTEE SISKIN is a Research Professor at NYU's Steinhardt School of Education, who conducts work in the sociology of organizations and organizational change with particular focus on high schools. Working with the Consortium for Policy Research in Education, she has been a Principal Investigator for two recent national studies of high school reform efforts: *Accountability and the High Schools* and *Comprehensive School Reform Designs in Secondary Schools*. She has also published numerous articles and three books, including *Realms of Knowledge, The Subjects in Question*, and *The New Accountability.*

THOMAS TIMAR is Professor of Education Policy in the School of Education at UC Davis, Associate Director of the Center for Applied Policy in Education, and Senior Associate, PACE. His areas of specialization are education finance and governance, education policy and politics.

ELISABETH WOODY was Principal Research Scientist at PACE, where she directed public school accountability and effective schools projects. She has spent much of her career examining the impact of public school policies and reforms on students' and teachers' daily lives. Her current work focuses on school and district efforts to address inequities in achievement, and an analysis of national trends in achievement by gender, across race, socioeconomic status, and language.