## Policy Paper No. PP88-3-2

## Conditions of Education in California 1988

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## March 1988

This paper was sponsored and published by Policy Analysis for California Education, PACE. PACE is funded by the William and Flora Hewlett Foundation and directed jointly by James W. Guthrie and Michael W. Kirst. The analyses and conclusions in this paper are those of the authors and are not necessarily endorsed by the Hewlett Foundation.

The authors and editors wish to express their sincere appreciation to Linda Humphrey of PACE, whose tireless, patient, and skilled efforts nurtured this report to fruition.

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Policy Paper No. PP88-3-2
Policy Analysis for California Education (PACE)
Berkeley, California
March 1988

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## Foreword

This is the fourth edition of Conditions of Education in California. It is the most extensive and inclusive issue yet. It has been altered in both content and format. The content has been expanded. In addition to previously appearing components such as enrollments, curriculum, governance, human resources, student performance, and finance, a special features section has been added. This year, education reform processes are the topic of this new section. Next year we will select a different topic on which to concentrate. Of course, we continue in this edition to include the sections on the evolving policy context and capital perspective in which we add our interpretations to California's conditions of education.

This publication is based upon compilations and syntheses of information collected by other agencies and individuals. These sources are noted throughout the publication. We wish here to express our appreciation to these others upon whose efforts we depend so heavily. Also, we undertake a substantial amount of original data collection and analysis. We make specific mention of these instances throughout the text also.

In that this publication is intended to be useful to a wide range of audiences, we have altered the format this year in a manner which we hope renders it more readable. We welcome comments from our readers regarding these changes and how we might better serve our clients.

James W. Guthrie

Michael W. Kirst

## Policy Analysis for California Education

Policy Analysis for California Education, PACE, is a university-based research center focusing on issues of state educational policy and practice. PACE is located in the Schools of Education at the University of California, Berkeley and Stanford University. It is funded by the William and Flora Hewlett Foundation and directed jointly by James W. Guthrie and Michael W. Kirst. PACE operates satellite centers in Sacramento and Southern California. These are directed by Gerald C. Hayward (Sacramento) and Allan R. Odden (University of Southern California).

PACE efforts center on five tasks: (1) collecting and distributing objective information about the conditions of education in California, (2) analyzing state educational policy issues and the policy environment, (3) evaluating school reforms and state educational practices,
(4) providing technical support to policy makers, and (5) facilitating discussion of educational issues.

The PACE research agenda is developed in consultation with public officials and staff. In this way, PACE endeavors to address policy issues of immediate concern and to fill the shortterm needs of decision makers for information and analysis.

In addition to Conditions of Education in California, PACE publications include Policy Papers, which report research findings; the Policy Forum, which presents views of notable individuals; and Update, an annotated list of all PACE papers completed and in progress. In the fall of 1988 PACE will introduce Conditions of Children in California. This new publication will attempt to provide a broader public policy perspective regarding children and schools and to ask a simple, provocative question: what is it like to be a child in California?

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## chapter 1

## The Evolving Context of California Education

California's schools are preoccupied with staggering enrollment growth and entangled in voter-imposed resource restraints. As a consequence, five years of reform progress is seriously endangered, and it is becoming increasingly difficult to overcome the mediocrity that threatens to dominate the education system.

## ENROLLMENT GROWTH AND RESOURCE RESTRAINTS ENDANGER PROGRESS

The purpose of this first chapter is to characterize current governmental and economic conditions that serve as a backdrop for education policy making in California. These conditions are constantly shifting. Hence the label, "evolving context." The purpose currently is to describe the dual challenges of quantity and quality that face the state and to explain how the past decade of changes in school governance will make it difficult for Califomia to meet these challenges.

Since 1983 Califomia's public schools have been involved in an intense effort to improve student performance. Progress has been accomplished on important dimensions such as the improvement of textbooks, enhanced enrollments in rigorous courses, and the increased academic achievement of minority students. However, unexpectedly large enrollment increases and a complicated set of voter-imposed resource restraints are bleeding reform energy from the system and eroding efforts to achieve educational excellence.

This chapter briefly describes the burgeoning enrollments now facing public schools, recounts the resource restraints which hobble the system, and illustrates the levels of student performance that result. However, the major portion of this chapter is devoted to an explanation of the governmental conditions and political dynamics shaping California education.

## HIGHLIGHTS

- Average enrollment growth is exceeding prior projections by 40 percent.
- The number of students is projected to grow from 4.4 million in 1987-88 to 5.65 million in 1996-97.
- One out of every nine school children in the United States resides in California.
- Enrollment growth alone will trigger the need for 42,000 additional teachers and classrooms, 2,100 new schools, and more than $\$ 7.7$ billion (current) in added resources.
- When contrasted with enrollments of a quarter century ago, today's students are more likely to come from poverty households, to have both parents employed outside the home, to be recent immigrants with only a limited command of English, and to have parents with education levels lower than that of a prior generation.
- Voter-initiated fiscal limitations-Proposition 13 and the Gann limit-severely restrain school revenues.
- California spends approximately $\$ 75,000$ per classroom less than New York.
- California's post-World War II policy makers met the challenge of even greater enrollment growth and maintained high education standards. However, they had access to added resources at both local and state levels.
- The magnitude of growth and restraints on resources threaten the momentum of California's education reform progress.
- California's school reform strategy (SB 813) possesses the potential to be effective. For example, statewide secondary school test scores showed the largest ever single-year gain in 1987. Minority student achievement increased even faster.
continued


## Unexpected Growth

Kindergarten through 12th grade enrollment increases are awesome as absolute numbers, and this growth is taking place at an unexpected pace. In 1985, government projections suggested that the state's enrollments would grow into the 1990s by an average of 100,000 students per year. This estimate has been revised dramatically upward. Each year between 1988 and 1997, public school enrollments now are predicted to increase an average of 140,000 students per year (Figure 1.1).

Total public school K-12 enrollment for 1987-88 is estimated to be 4.4 million. This is projected to increase to 5.65 million students by 1997. ${ }^{1}$ By the end of this projection period, one out of every eight school children in the United States will live in California (currently, the number is one out of nine).

- Overall, however, statewide student performance is average when compared to the nation.
- Proposition 13, Gann, and Serrano solutions have dramatically altered California school governance.
- School decisions are now highly centralized at the state level.
- Local school districts are almost totally dependent upon the state for revenue.
- Education issues have become highly political.
- Citizens are badly confused about school decision making and education funding.
- It is improbable that solutions to California's confusing system of school governance and restrained levels of resources will result from the actions of elected officials. Voter action is likely to be needed.

FIGURE 1.1 Projections of Growth in Enrollment, Number of Teachers and Schools, and Funding, 1987-88 to 1996-97


SOURCE: PACE analysis of Department of Finance, Commission on Finance and Legislative Analyst data.

The growth is highly concentrated in Southern Califomia counties. The impact in terms of human resources and financial commitments, however, is statewide. Annual enrollment increases of this magnitude, assuming current ratios, will necessitate more than 4,600 additional teachers and new classrooms, and more than $\$ 800$ million new dollars, each year.

In the aggregate, these enrollment increases alone will trigger a demand over the next decade for approximately 42,000 new teachers, raising the state total to 234,000 ; more than 2,100 new schools, California now has approximately 7,200 ; and an additional $\$ 7.7$ billion, the state currently spends $\$ 21$ billion.

Historic Comparison. Surprisingly, this remarkable expansion is not the greatest in the history of California's schools. In the decade following World War II, incoming students were greater both in terms of growth rates and in overall numbers. Between 1950 and 1960, enrollments more than doubled as a percent and increased absolutely by 1.8 million students.

Compared to their immediate post-World War II predecessors, today's students in California are far more heterogeneous ethnically, experience greater incidence of poverty, more frequently are overseas immigrants who have not yet leamed English, and come from households in which the education level has declined over prior generations. Nevertheless, even if in less complex times, post-World War II policy makers and professional educators faced a stiff challenge. They had to employ thousands of new teachers and build thousands of new schools. How did they marshall the resources needed to meet their challenge?

Not only did public officials and education professionals meet the post-World War II challenge of growth, but they did so in a manner which maintained California as a lighthouse system of schooling. Through local property taxes and added levels of state funding, public officials from a quarter century ago generated the necessary resources. Such is not now easily possible. California school revenues are unusually restrained at both state and local levels by voter action.

## Resource Restraints

Presently, policy makers must wrestle with a slate of voter-enacted revenue restraints that inhibit their ability to meet the challenge of added numbers of students and simultaneously strive for educational excellence. Proposition 13 , enacted in 1978, and Proposition 4-the so-called Gann
limit-enacted in 1979, put California's public education revenues in an unusual fiscal vice. Califormia thus simultaneously subjects school spending to both local and state fiscal restraints.

School resource policy in California is no longer the province of locally elected officials. Enactment of Proposition 13 crippled the state's conventional mechanisms for local control of education. School boards now have no discretion over tax rates.

These tax limitations, when taken in tandem with legislated solutions to court decisions in landmark school finance cases such as Serrano v. Priest, effectively converted California into a state system of school finance. Subsequent enactment of the Gann limit forcefully propelled school funding into the rough and tumble arena of statewide partisan politics. These governmental arrangements have placed public education in a narrowly limiting financial straitjacket in which movement is possible only as a consequence of an unrealistic degree of political consensus on the part of state-level policy makers.

## THE THREAT OF MEDIOCRITY

Despite clear signs of hard-won progress, student performance measures continue to lag behind aspiration levels held by many policy makers, professional educators, and parents. Statewide, academic achievement is average, slightly above average in the elementary grades and slightly below at the secondary level. Though having increased over time, the number of academic courses taken by secondary students is about average when compared to the national pattern. Statewide average Scholastic Aptitude Test scores are about average for the nation.

Class sizes in California are among the largest in the United States. Teachers' salaries, though above the national average generally, when factored by California's cost of living and the high seniority of the teacher workforce, come close to the middle in terms of purchasing power.

Overall per-pupil spending for California, $\$ 3,751,{ }^{2}$ is below the national mid-band. In 1988, statewide average perpupil spending ranks somewhat behind similar industrialized states such as New York, Illinois, Pennsylvania, and Michigan. On a per-classroom basis, California spends $\$ 75,000$ ( $\$ 2,500$ per child) less than New York.

Even when faced with the dual challenges of staggering enrollment growth and resource restraint, there are clear instances where school district local leadership, vision, and
community commitment are being combined in an unusually productive manner. A 1987 PACE study of a statewide sample of schools revealed the potential of California's reform strategies to render education more effective (see Chapter 9 ).

These successful efforts are reflected in enhanced measures of pupil performance. For example, 1987 displayed the largest single-year increase in California Assessment Program (CAP) secondary school scores in the state's history. Additionally, minority students have continued to improve their performance on both statewide and national examinations. Larger numbers of students from throughout the state are taking the Scholastic Aptitude Test (SAT), required for admission by many colleges.

## Next Steps

Education and education policy in California are locked in a vice. The confines are resource constraints which do not easily accommodate to the dual challenges of unanticipated enrollment growth and a desire for educational excellence.

In any particular year, through an unusual level of agreement on the part of many political actors-the governor, legislators, superintendent of public instruction, labor unions, business representatives, professional eductors-a marginal amount of improvement can occur. School financing can match needs imposed by growth and inflation. Student achievement can be elevated by a few test score points. Additional teachers can be atracted into the system.

However, systemic breakthroughs aimed at excellence are unlikely to occur simply through year-to-year agreements in Sacramento by public officials. Until a complicated set of governmental restraints has been relieved, California's system of public education is threatened by mediocrity.

The remainder of this essay explains the nature and evolution of these governmental restraints and describes their consequences for local school districts and citizens.

## LOSS OF POLITICAL CONSENSUS

In 1987, consensus about California's education reform policy tumbled apart. However, the loss of political consensus is far more a consequence of fundamental structural elements in California's governmental landscape than it is a temporary burst of anger among a few highly visible public officials.

Between 1983 and 1987, California experienced unusual political agreement, or at least acquiescence, on major educa-
tion issues. The reform agenda symbolized by the 1983 enactment of Senate Bill 813, and the implicit contract between policy makers and educators for more school financing in exchange for more school reform, was supported by Democrats and Republicans, business and labor, administrators and school board members, the California Teachers Association and the CaliforniaFederation of Teachers, the state Senate and Assembly, and the superintendent of public instruction and governor.

However, by late 1986 troublesome ideological and partisan fissures were beginning to appear in this unusual multiparty pact, and by mid 1987, during budget deliberations, the cracks in the consensus were gaping.

In 1987, the governor and the state superintendent disagreed about education and wrestled with each other to control the education agenda, important business community elements were less enamored of conventional school reform strategies and the education posture of both the superintendent and the governor, Democrats and Republicans had parted ways on significant education policy issues, many Senate and Assembly leaders seemed no longer to regard education as a major issue for them, and professional educators could no longer easily agree among themselves about the next steps of school reform.

New ideas were introduced into the policy arena about matters such as professionalizing teaching and rewarding school performance. But they were never seriously considered and certainly not enacted into policy. The governor formed a new statewide Commission on Education Quality, but it still was not clear that an education policy consensus could be put back together again.

The 1983-86 political agreement in support of reform was stimulated and sustained by an atmosphere of crisis. Sinking economic productivity, national debt, international commercial competition, trade deficits, and a declining dollar placed the nation, and thus California, in increasing economic jeopardy. Schooling was seen as part of the problem and part of the solution. Anxiety about the nation's and state's economic future was sufficient to cauterize partisan wounds and catalyze political action.

The public was increasingly concerned about education and the professionals who provide it. In 1986, education ranked fifth in the public's list of concerns on the California Field Poll; in 1987, education topped the list.

The economic uncertainty which loomed large in 1983 was, if anything, more intense in 1987. True enough, 1987's inflation rate was within reasonable boundaries, and early 1988 unemployment rates were the lowest in two decades.

Nevertheless, informed individuals continued to be intensely concerned about high rates of national and personal debt, federal budget deficits, defaults on loans to Third World countries, uncertainty of petroleum supplies, and low levels of personal savings, exports, and service-sector productivity.

All of these problems may have been encapsulated in Monday, October 19, 1987's dramatic stock market decline. In short, the public problems previously motivating California'seducation reform did not disappear. However, the political consensus previously supporting reform was badly shaken.

In retrospect, the surprise is that the past political consensus was as encompassing and enduring as was the case. Despite the crisis-like character of the economic uncertainty that initially stimulated education reform, a series of structural features has evolved in Califormia which renders it difficult to gain and sustain agreement abouteducation policy and schooling resource levels. Much local school district decision discretion has been diluted and resilience to statewide fiscal and economic downturns and adaptability to local conditions has been lost.

Conversely, as a consequence of Serrano compliance effects, Proposition 13, and other events, California effectively now has a state system of education, even if public opinion has not easily caught up with the fact. The result is that local education reverberates to state-level shock waves, and structural features exist that virtually guarantee that such shocks will come.

Since the state pays the major portion of the education bill, schools must compete for funding more than ever before with prisons, freeways, and other state responsibilities. The fact that state revenues are constrained by the Gann limit makes the competition ever more intense. The fact that Democrats dominate the legislative branch and Republicans control the executive house confounds the problem.

And, as if all of that were not enough, the California constitution specifies that there will be a statewide elected executive official speaking for education-the superintendent of public instruction (Bill Honig)-and an overall state chief executive-the governor (George Deukmejian)-a situation almost ensuring conflict.

Given such structural confusion, it is difficult to understand how the 1983 education reform consensus occurred. All that aside, the dominanteducation policy challenge in California, at least for the near future, will be overcoming these structural restraints and rebuilding this consensus or seeking a new one.

## THE EMERGING POLITICAL ECONOMY OF CALIFORNIA EDUCATION

California's public schools are increasingly influenced by a fourfold fusion of structural conditions and societal forces:

- centralized state decision making
- local district revenue dependency
- increased politicization of education issues
- citizen confusion regarding education governance Before describing each of these forces in detail, it is important to extend two caveats. First, these four conditions are themselves interrelated and mutually reinforcing, and on several dimensionsit is difficult to separate cause and effect. Second, almost every classification system is blurred or evasive at its categorical edges, and what follows is no exception.


## Escalating State Power

An intensified state role in school decision making was signaled by the 1973 enactment of Senate Bill 90 . This school finance plan, passed as a response to the California Supreme Court's decision in Serrano v. Priest, established per-pupil revenue limits for school districts.

This state limitation of local discretion was powerfully reinforced five years later when, on June 6, 1978, Califormia's electorate enacted Proposition 13 by a two-thirds majority. This popularly enacted ballot initiative amended the state constitution to restrict annual ad valorem taxes to one percent of a property's market value and specified limited conditions under which property assessments can be increased.

Proposition 13 triggered a revenue-cutting climate, and other efforts to reduce the size of govermment followed, such as indexing the state's income tax to cost-of-living increases and placing a ceiling on total state spending. This latter resulted from another ballot initiative, the Gann limit enacted by state voters in 1979, about which more will be said later. Over a six-year period, then, the state legislature (by statute) established limits on annual increases in school expenditures, and voters (by initiative) established limits on local governments' ability to raise revenues and the state's ability to spend revenues.

These restrictions were not always seen as measures to enhance state power while limiting local power. Campaign rhetoric at the time of Proposition 13 's passage characterized it primarily as a tax limitation measure. Indeed, proponents pointed out that California's residential property taxes were then among the highest in the nation and contended that many
homeowners would pay the equivalent value of their residences to the tax collector faster than they would retire their mortgages. Conversely, opponents feared the worst and predicted that passage of Proposition 13 would lead to publicservice reductions of crisis proportions.

It may be that partisans on both sides of the issue were poor prognosticators. There have been a number of unanticipated outcomes. However, the most significant Proposition 13 consequences may prove to be far more political than fiscal. The fact that local school boards no longer could exercise revenue discretion may have been surprising to fiscally conservative supporters of Proposition 13 who often were also ardent defenders of "local control."

Proposition 13 is a root cause of the revenue dependency, increased politicization, and citizen confusion to be discussed below. The issue here, however, is centralization of education decision making. The federal Constitution is silent regarding education and schooling. This condition, taken in tandem with the 10th Amendment and state constitutional provisions, renders education a state function in the United States. California is no exception to this condition, and for almost 130 years, since its acceptance into the Union, California's state officials have held plenary authority over the provision of public schooling.

Despite such legal logic, 19th-century transportation and communication conditions demanded that the state delegate much of its operational responsibility for schools to local districts and their elected boards of directors. This operational devolution of authority led to the historically revered axiom of "local control" of education.

To be sure, local control was never total, and school district discretion has been undergoing gradual erosion for a long time. As the state evolved from virtual total reliance upon agriculture and extractive industries to a more complicated mercantile and manufacturing economy, education assumed greater signficance for both individual fullfillment and the state's economic well being.

As a consequence, state officials intruded more frequently to impose greater regulation regarding matters such as teacher qualification, required school subjects, and fiscal accountability. Indeed, by the middle of the 20th century, California was known to have among the most voluminous and restrictive of education codes among all the states.

However, despite such a relatively strong state role, even by the mid 1970s most Californians would attest to the importance of local citizen control over school matters, and for many practical purposes such local operating discretion was a reality.

Prior to Proposition 13 's passage, state revenues constituted approximately 42 cents out of every California public school dollar. After Proposition 13, use of state surplus general funds ( $\$ 7$ billion in 1978) to bail out local governments elevated the proportion of state support to more than 80 percent. Increases in total property tax assessed value have subsequently enabled the state to reduce its school support contribution to approximately 65 percent. Nevertheless, through statutes, the state dictates the source of more than 90 percent of an average local school district's revenue.

The state is now not only the overwhelming senior school revenue partner, but the junior partners, local school boards, have virtually no revenue-raising discretion. Thus, for practical purposes, California now has a state-funded system of public school support. There are important economic and political consequences of this arrangement, about which more will be said later.

Some may contend that decisions need not follow the dollar, but conventional wisdom and practical experience argue to the contrary, at least where government is concerned. State officials, correctly viewing themselves as responsible for generating school revenues, also believe that fair principles of public accountability dictate that they specify the manner and purpose for which the funds are to be used. From the perspective of state-level officials, to do otherwise would be to abandon their fiduciary responsibility.

Proposition 13 did not singlehandedly transform the governmental landscape. Local school board discretion was being hemmed in by other factors as well. For example, enactment of a state collective bargaining statute in 1975 altered school board decision making. Also, a stream of related school finance court cases was initiated in 1968 which constrained local school districts. Prior to the mid 1970s, local property taxation procedures permitted wide variations in local school district spending-the constitutionality of which was successfully challenged in Serrano v. Priest.

The 1973 trial court decision in this case, appeals of which have continued to the state Supreme Court into 1987, resulted in legislative enactment of the previously mentioned Senate Bill 90 per-pupil ceiling on local school district spending. Nevertheless, at least in a theoretical sense, prior to June 6, 1978, local school boards possessed taxing authority. Following Proposition 13, they were stripped of this last potent vestige of local control. A prime governmental outcome has been to shift increasing numbers of decisions to the state level. State officials now make more, and locally elected officials now make fewer, signficant choices regarding schools.

These centralizing shifts have not occurred in a social
vacuum. While governance procedures have been altered favoring state control, broader social forces have been moving to render education increasingly important in California's future. Pressures of a true global economy and the need to compete internationally now place added burdens on the state's school system. Capital, ideas, and new technology increasingly know no national boundaries.

It now seems as if the most reasonable hedge against future uncertainty is for a society to invest in human capital. Thus, in order to protect its future, California is admonished to develop its human resources. This translates primarily into effective public schools. And, while formal governmental reforms such as Proposition 13 are practically and symbolically significant, broader social and economic forces are also weaving a tapestry of change that thrusts the state into an ever increasing decision-making role for schools.

The escalation of pedagogical decision making to the state has occurred on several important dimensions. State control over revenues is crucial. In addition, personnel matters are now influenced by the state through a relatively new agency, the Public Employees Relations Board (PERB). School construction is almost totally controlled by the state through the Office of Local Assistance (OLA) and the State Allocation Board (SAB).

Through statutory provisions of Senate Bill 813, the state prescribes high school graduation criteria. The State Board of Education promotes model curriculum standards for local school districts. In addition, the state presently specifies the purposes to which approximately $\$ 3.9$ billion a year in categorical aid funds can be used. The purposes are implemented through state-issued regulations and through periodic state program evaluations. The state now conducts an extensive testing program to assess the outputs of local school districts, and this endeavor is scheduled for further expansion.

Although there continues to be a degree of local school district operational discretion, on significant dimensions such as money, personnel, curriculum content, tests, and buildings, the state is in the driver's seat more intensely than ever before in California's history. In short, in finance, curriculum, and other governance areas, the state is exercising increased deci-sion-making powers.

## Revenue Dependence

Today, approximately 65 percent of California's public school revenues stem from state income and sales tax proceeds. This means that the nature of national, regional, and statewide economic conditions shapes school resources in an
unprecedented manner. In uncertain, stagnant, or declining economic circumstances, the prospect of school revenue declines is high.

The period between 1978 and 1983 provides a good example. The end of the 1970s was characterized by high rates of economic inflation. The Consumer Price Index (CPI) rose almost 13 percent in 1979. This was a time when the prime rate established by major banks on loan interest soared to 22 percent. The public was highly supportive of tax-cutting proposals. School revenues during this time did not keep pace with inflation.

The early 1980s were equally devastating. Sagging production of goods and services resulted in two-and-onehalf years of virtually no gains in Gross National Product (GNP). Unemployment rates nationally reached 12 percent. The federal government budget began to amass huge dollar deficits. States, generally precluded from deficit financing, simply had to reduce spending on public services. It was a period of substantial economic instability for the United States, and, though insulated slightly by its diverse economy, California suffered almost as much as the remainder of the nation. California's public schools suffered badly indeed. Between 1978 and 1983 the average California classroom lost $\$ 6,000$ in purchasing power. ${ }^{3}$

States which depend more heavily upon locally controlled property taxes for school support had a resilient source of revenue and more easily withstood the financial erosion. Nearby Oregon, for example, despite being hobbled by depressed markets for forest products, electronic goods, and tourism, maintained its already high level of spending as well as its rate of growth much better than did California. Many Oregon school districts, through their local taxing authority, were able to compensate for recessionary reductions in state revenues.

Conversely, California districts, in the absence of any local taxing discretion whatsoever, were powerless to undertake such compensating actions. For California, the nation's and state's economy, rather than local school district preference, dictated the level of school support.

## Increased Politicization

California education policy generally and school financing specifically have become the subject of intensified statelevel political controversy and partisan disagreement. So what, one might reasonably ask. Much of public education has always been the subject of political concern. Moreover, any item which absorbs more than $\$ 21$ billion annually and
occupies almost 40 percent of the entire state budget can reasonably be expected to attract the attention of political officials. However, there are at least three dimensions of the currently evolving political dynamic which are different and which have practical consequences.

First, because of the escalation to the state level of education decision making, there are far fewer prime participants involved in the policy process than ever before. Second, the concentration of political power and the enhanced societal significance of education now renders the practical consequences of political decisions far wider and more visible than ever before. Third, because of the structure of California state government and perhaps as a consequence of schooling's elevated importance for the state, education policy appears to be the subject of ever more intense partisan political disagreement.

It is not easy to know with scientific precision what amount of money should be spent on public schools. Also, what should the purposes of schooling include? Who should be permitted to teach? What levels of student performance should be expected? The issues are made even more complicated by the competition for resources between public schools and California's complex systems of community colleges, the California State University, and the University of California. These higher education segments themselves annually require billions of dollars in state support.

Moreover, a large and diverse state such as California has many public services, not simply schools, for which it is responsible. Schools must compete for resources with the criminal justice system, transportation, recreation, welfare, and health services. Direction and funding levels for all of these are subjects and dimensions on which reasonable persons can disagree. Thus, because of their complexity and significance, public policy decisions about such services are and long have been inherently political. However, there are several significant new wrinkles.

Concentration of Power. One of the new conditions of education politics is their increasingly concentrated and consequential nature. All the above-listed dimensions of potential political conflict have existed literally for decades. However, in California's past the number of actors in the education decision-making arena was vastly larger and geographically more dispersed than is the case currently. For example, when local school boards participated in the decision arrangements about education finance and had taxing discretion, funding levels were established through the actions of thousands of locally elected public officials. The essential or immediate actors today are the 120 members of
the legislature and the governor.
The representative nature of the decision process has been diluted greatly, power is now wielded by those more remote from both the clients and employees of schools. Fewer people have more to say about an ever larger number of increasingly important education matters.

WiderConsequences. Power is more concentrated. The reason for concern on this dimension is that the consquences of schooling decisions now affect a far wider number of individuals and the decisions themselves are about more significant items. If a local school board reduces the scope of a program, increases teacher salaries, uses a new test, alters the length of the school day or year, decides to use different textbooks, or raises taxes, only a relatively few people are affected-those pupils, parents, professional educators, and members of the public who reside in or work for the specific district. If the board has made a mistake, certainly people will suffer. However, the ill consequences of their actions are circumscribed and do not easily infect a wider audience.

The contrast with the evolving decision circumstances in California is immediately apparent. If the legislature and governor reduce funding, intensify standards, or alter programs, the consequences are not restricted-they have the potential to affect every school district, school, and student in the entire state. If the decisions are reversed or halted midstream, confusion results. Further, it takes about three years for decisions to trickle down to the school level. Decisions made at the central level cannot be changed within that time span without creating confusion within districts and, eventually, increasing the probability of cynicism among teachers and administrators.

In effect, school decisions taken centrally by state officials now shape the lives of millions of individuals. If the "right" decisions are made, then many individuals stand to benefit and the welfare of the entire state will be advanced. However, the risks are great. If a poor decision is reached, the consequences now are more pervasive than ever before. Decentralized decision making assuredly contains its own risk. For example, left to local districts alone there may never have been widespread attention to larger problems such as the need for bilingual education, education for handicapped students, or school spending inequities. Moreover, during the 1970s some local school districts abandoned high academic standards for their students and the current school reform movement is no doubt a partial result. However, a decentralized system is more resilient in an instance of error. California has sacrificed a major element of resilience.

Increasing Partisanship. Education's increasing policy
visibility, taken in tandem with electoral campaign dynamics, contributes to higher levels of partisan political rhetoric about schools. Competing candidates for public office are virtually required by electoral dynamics to find a way to separate themselves from opponents on important issues. It is difficult in politics to operate a successful "me too" campaign. If there are no important political issues, candidates may be impelled to invent them.

If candidates are unable or unwilling to invent issues and develop partisan differences, then the media are sometimes under pressure to do it for them. News and current events are now often marketed as entertainment. A less than fully responsible television or radio station, newspaper, or magazine is impelled from this perspective always to find a new controversy to feed the public in order to sustain "market share."

Given the growing significance of education, candidates and parties increasingly adapt a partisan stance on schoolrelated issues. A strong element of partisan disagreement or controversy is difficult to avoid. What may once have been a local school district issue-more rigorous textbooks, a smoking room for students, or intensified graduation stan-dards-is now a statewide issue. If it is an issue for the entire state, then greater political visibility is likely to be attached to it and the opportunity for media exposure is thus multiplied. If media coverage is involved, then a public official had better have a position on the issue, a position that distinguishes him or her from electoral opponents or prospective opponents.

Politicization of education in California is exacerbated currently by three additional conditions, one of which may be temporary or cyclical, the other two of which are more structural in nature and thus likely to be enduring. First, the legislative and executive branches are now dominated by different political parties. This has happened before, and likely will happen again. It is partially a consequence of the system of checks and balances which characterizes American government. Nevertheless, divided legislative and executive control entangles education issues and funding levels in convoluted new webs of party strategy and political conflict.

California's constitutional provisions also intensify political controversy in education. The governor, by virtue of the wide charter accorded the office, might be expected to be a statewide speaker on education matters. In addition, however, California elects a superintendent of public instruction who, quite understandably, views the office as a platform from which to advocate school issues.

The outcome is to have two highly visible public officials, each with a statewide constituency, positioned to speak
on education matters. The office of superintendent of public instruction is formally nonpartisan. However, the significance of education to the state, and the high public visibility of the office, renders most any occupant a prospective candidate for an even higher political post, such as the governorship. The opportunity for policy conflict with an encumbent governor or potential candidate for the chief executive position is evident.

The politicization plot is made thicker by the 1979 enactment of the previously mentioned Gann limit, named after its most visible citizen proponent, tax-cut advocate Paul Gann. This constitutional provision, the result of another popular electoral initiative campaign, limits spending levels for state and local governments to increases determined by population growth and macroeconomic indicators.

Given the paramount state role in funding schools, the only way that education can receive proportionally greater per-pupil funding is to edge out another public service for resources. If the state's overall budget is relatively fixed, then, for example, transportation or criminal justice budgets must be reduced to provided added per-pupil aid to schools. This condition only exacerbates what already is a politically controversial situation.

An additional complexity is posed by the fact that California limits public revenues at two levels-locally through Proposition 13 and statewide through the Gann limit. The consequence is to rendereducation funding in California more centralized and, thus, potentially more partisan and conflictual than in most any other state.

Moreover, some policy issues erupt episodically but are not recurring. Prison construction, AIDS research funding, and judicial reform are examples of issues, however important during their time, which do not recur frequently. Schools are different. The cyclical nature of school funding, and the huge amounts of money involved, mean that education now finds itself subjected to the slings and barbs of state-level wrangling every year.

## Citizen Confusion

This dimension of the evolving context may be a product of the three above considerations: concentration of power, state-level revenue dependency, and added politicization. Regardless, there is little denying the phenomenon. California's electorate has scarcely any accurate understanding of the fundamental education problems facing the state. Also, citizens are generally unaware of the vast costs of the state's system of public education and are bewildered
regarding the sources of revenue. The current kind of debate regarding school policy apparently contributes little to, and may detract from, public understanding of education issues. Opinion-poll results supporting these assertions are dramatic.

Californians display little agreement regarding the conditions of their public schools and even less knowledge of the major issues facing education. For example, a representative sample of respondents to a 1987 statewide survey of voters were almost equally divided in their evaluations of schools. Exactly 50 percent of those queried thought California schools were getting worse or did not know. The remainder believed that schools were getting better ( $21 \%$ ) or staying the same (29\%). Additionally, when asked specifically about their own community's local schools, respondents in such polls almostalways rank them more favorably than schools in general throughout their state or the nation. Not so in California where little distinction was made by respondents in their evaluations of local schools versus the state schools generally.

From 50 to 70 percent of those polled were apparently unaware of major facts and issues such as the following. They did not know nor understand the magnitude of enrollment growth now taking place in California's schools and the fiscal consequences which flow from that growth. They did not know that California's class sizes are rated among the largest in the nation, that approximately one-third of 9th graders in the state drop out of school prior to graduation, that the state is predicted to need approximately 80,000 additional teachers over the next few years (enrollment growth plus attrition), or that on average starting teachers are paid an average annual salary under $\$ 21,000$.

When asked about school finance matters, 56 percent of those questioned believed property tax revenues contribute a great deal to school support or they did not know. Conversely, 65 percent think state sales taxes contribute very little or do not know, and 47 percent think state income taxes contribute very little or do not know. A significant proportion of respondents, 70 percent, cannot approximate the proportion of school revenues contributed by federal taxes. Similarly, only 33 percent could correctly estimate the revenue proportion stemming from the state lottery. Most respondents, 52 percent, think lottery contributions are larger than the three percent they actually represent. Fifteen percent admitted they do not know what the lottery contributed.

It is noteasy to explain the degree of public ignorance and confusion. There are few baseline data against which to compare the above-described poll results. It is possible that Californians have always been perplexed by school financing
arrangements and education issues. However, it is also reasonable to posit that the unusual number of alterations in school financing over the last two decades, as state government has responded to policy shocks such as the Serrano decision, Proposition 13, and the Gann limit, have rendered school financing a particularly challenging public information dimension.

The school finance pattern prior to Serrano had been in place for approximately 50 years. In contrast to such stability, in the decade and a half since the 1973 Serrano trial court decision, the state has had five distinctly different school finance plans. Enactment of the lottery initiative in 1985 could not have done much to clarify the issue in the public's mind. Now that lottery proceeds intended for school support are folded into the main body of state education funding, and no longer serve as a specific addition, the public may be even further confused regarding school financing.

Presently, California citizens appear woefully underinformed regarding school matters. Public uncertainty and ignorance render rational decision making difficult in a democracy. This condition, when coupled with the previously described concentration of power at the state level, tight linkage between school funding and the state's overall economy, and the more intense politicization of education issues, renders this a particuarly unstable period in the external political and economic environment of public schools.

## WHAT ARE THE CONSEQUENCES?

A major consequence of the erosion of policy consensus and relatively recent alterations in California school governance and finance is to inject added uncertainty and instability into the operation of local districts and schools. In addition to whatever specific local circumstances prevail, school board members and education professionals now must also contend with state and national economic trends and state politics. As a result, school revenues cannot easily be projected from one year to the next. Moreover, in that the mix of state-appropriated categorical versus general aid funding has become an increasingly complicated and controversial matter, local districts cannot now easily predict which programs will continue.

Local school district officials and employees often see themselves as insecure pawns in a state-level game of political chess. For example, if a district has good reason to fear that a state revenue reduction is in the offing, it begins a game of organizational Russian roulette. Employee layoff letters must be distributed to comply with a statutory specification for advance notice. Under current conditions the letters are
usually withdrawn when a state-proposed funding cut or program reduction is restored.

Whereas this procedure may appear at a distance to be legally tidy or bureaucratically responsible, it creates practical planning nightmares to district officials and engenders personal animosity and insecurity on the part of teachers. School districts are legally obligated to bargain with employees over salaries and fringe benefits. However, they are not in control of their own revenues and thus may not be able either to negotiate the contractual provisions they believe appropriate for their school community or fully comply with such provisions if they do.

The uncertain nature of school finance and the halting character of state school policy formation discourages systematic planning on the part of local school officials. They can come to view their decisional world as sufficiently capricious and beyond their control as to impede the systematic analyses and strategic planning they should undertake in order to utilize resources effectively and tailor school services to the preferences of their local publics.

Current education reform momentum is threatened by these uncertain conditions and the relative inability of local school districts toplan for the future. For example, new school buildings require literally years to plan and construct. Restructuring a school's curriculum depends upon the ability of a district to recruit new and retrain existing teachers. Funding
uncertainty undermines efforts such as these.
California has taken nearly a decade to recover from the fiscal hardship initiated during the late 1970s. The education reform movement is fragile in places, and sustained political and fiscal buffeting adds to a sense of organizational insecurity. Overcoming these conditions may necessitate rebuilding the old or seeking a new policy consensus.

If the state is unable to overcome these complicated structural conditions that restrain resources and inhibit consensus, the progress of the current education reform movement is seriously endangered. The long-run result is to prevent the preparation of a competent work force and informed electorate upon which the state's future will crucially depend.

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## chapter 2

# Capital Perspective 

Conditions of Education in California 1986-87characterized the 1985-86 legislative session as marking the end of a period of state education reform initiatives and serving as a harbinger for future uncertainty. For the first time since the national resurgence of interest in education issues and the state's renewed emphasis on reforms and standards, there were no fundamental structural or programmatic state initiatives enacted. If one judged simply from 1987, the first half of the legislature's two-year session, the future would appear even more uncertain.

Faced with the specter of the Gann limit which constrains the state's ability to fund social services, competing public demands from other sectors of the budget-higher education (especially the community colleges), transportation, prisons, and toxics, for example-and a rapidly expanding $\mathrm{K}-12$ student population, the education reform agenda was placed on a back burner as state policy makers became enmeshed in political gridlock of the first order. Much of what transpired in the state capital in 1987 illustrates the structural political conflict described in the preceding chapter.

## POLITICAL CLIMATE

Events in 1987 represented a breakdown in communications between the legislative and executive branches of govermment. During the course of the session there were few substantive meetings among the governor, speaker of the Assembly, and president pro-tempore of the Senate. Experienced capital observers noted that the lack of direct face-toface negotiations hampered efforts to construct compromises on key education and budgetary issues that divided the branches of government, the two houses of the legislature, and the political parties.

In 1983, the passage of Senate Bill 813 was a bipartisan effort with strong and sustained involvement by key members of each legislative caucus and by the superintendent of public instruction; and although neither the governor nor his staff played a vital role in the development of SB 813, direct lines of communication were established at key points in the negotiating process. This was not the case on major issues

## HIGHLIGHTS

- Unlike 1983 when SB 813 was enacted as a truly bipartisan effort, events in 1987 signaled a significant breakdown in communication between the legislative and executive branches of government and unusual tension between the governor and superintendent of public instruction. These relationships hampered efforts to construct compromises on key education issues.
- A key pointof controversy between the governor and legislature became the governor's pledge to enforce the Gann limit and return a $\$ 700$ million surplus to taxpayers in the form of a rebate. Democrats wanted this surplus money to go to schools; Republicans wanted it to go to taxpayers. Political gridlock ensued, and schools received no additional funding.
- There are signs that the broad-based coalition of education lobbyists which has existed for 15 years is beginning to unravel and its ability to influence education policy is declining.
- The Gann limit casts a large shadow over California education. Voters will be asked to decide in 1988 about modifying the limit, but prospects for modification are reduced by lack of private-sector commitment to change and uncertainty about the governor's willingness to support any alteration.
- As fiscal resources become scarce, there is growing evidence that categorical programs will be more closely scrutinized by the governor and legislature, increasing the possibility that some lower-priority programs will be modified or eliminated.
- The recently initiated education reform momentum is showing distinct signs of slowing. None of the second "wave" of reforms relating to professional issues has yet been approved.
- Education policy may take a different turn in 198889 as a result of the governor's determination to take a leadership role in shaping state education policy.


## continued

facing the legislature in 1987. It was lacking most notably on one of the two most divisive issues (the other being prisons) facing the legislature this year: disposition of the money the governor declared as exceeding the Gann limit. The inability to reach a timely compromise, partially caused by the absence of normal face-to-face, good-faith negotiations, hurt education interests.

The rebate issue also served to divide the education lobby, with some advocates taking an all-or-nothing stance and others arguing that a compromise should be struck so that schools would benefit from the increased revenue that became available during the year. It was obvious, however, that sufficient lines of communication had not been established to help forge such a compromise.

If the relationship between Governor Deukmejian and the legislative leadership could be characterized as negative, the 1987 relationship between the governor and Superintendent of Public Instruction Honig was hostile. In introducing his 1987-88 budget, the governor cited multiple problems generated by an unexpected shortfall in revenue, continued his commitment to a billion dollar "rainy day" fund, and reaffirmed his pledge not to raise taxes. He introduced a budget that was far lower than his efforts of the past three years.

As introduced, the budget failed to provide for inflationary growth, called for the elimination of four legislatively popular programs, and provided that a portion of the funds made available by this elimination be used for a reduction in class size. In addition, the governor proposed to eliminate funds for several state mandates, most noticeably, costs of collective bargaining.

The state superintendent vigorously voiced his disapproval of the budget, saying, "I think the governor's description of his budget is a misrepresentation." He later added that the budget represented a "disaster," a "reversal of policy," a "betrayal" of earlier commitments, and that it would "jeopardize the whole reform movement." Deukmejian struck back by calling Honig a "whiner," a "snake oil salesman," and a "demagogue," assessing Honig's criticism as "totally irresponsible" and accusing the superintendent of conducting a "disinformation campaign."

Honig wasted little time in mounting a statewide grassroots effort to lobby for additional education funding. This effort, the California Movement for Education Reform (CMER), is a broad-based coalition including the long list of major education lobby groups in California. Its assignment was:

> to advocate for sufficient funding in the 1987-88 budget
*. Much of the future direction of education in California, the nature and fate of school reform, the decline or fall of categorical aid, and the increase or decrease of local control and accountability will likely be shaped by the report of the governor's Commission on Educational Quality, due to be released in 1988.

- to establish a grass-roots organization to qualify an initiative to modify the Gann limit
- to continue to work for long-range, stable, adequate funding
The formation of the committee was later characterized by Republican leaders, after viewing a videotape produced by CMER, as the "SMEAR" committee. There could no longer be any doubt that the bipartisan milieu that existed during the debate over Senate Bill 813 was gone and that education had become a partisan issue.

Superintendent Honig's first term in office has been characterized as representing a broad-based bipartisan effort. The superintendent elicited support from Republicans, Democrats, business leaders, teachers, and parents. Part of the key to his early success was his ability to mobilize supporters to pressure the governor and individual lawmakers during budget and legislative controversies. But in 1987, after attacking the governor's budget, Honig's direct appeals to Assembly Republicans for support only served to increase hostilities.

Buttressed by reports from the auditor general, controller, and Little Hoover Commission, the governor responded by accusing the schools of mismanagement and blamed Honig for his lack of leadership in addressing this issue. Honig and Deukmejian each utilized a series of press conferences as their major communication device, which only added to the animosity.

After the legislature adjourned, the governor and superintendent defused their battle, held conciliatory discussions, and promised to work more closely in the future. For 1987, however, the discussions took place too late to ameliorate the damage.

## THE GANN LIMIT

No other issue so dominated state political deliberations in 1987 as the Gann limit. The limit, designed to reduce state and local governmental expenditures, became a reality midway through the budget deliberations. The Department of

Finance originally projected that the Gann limit would not be activated in the current year because projected revenues were far below original expenditure expectations. However, as Department of Finance revenue projections were revised upward by $\$ 1.1$ billion in mid year, it became clear that all future budgetary deliberations would be dominated by Gann limit considerations.

State policy makers found themselves in an ironic double bind. As revenues decline, more room is available for expenditures within the limit, however there are insufficient revenues to support additional expenditures. Moreover, as revenues increase-normally a positive political occurrence-the Gann limit is implemented, effectively destroying the ability of state and local governmental entities to expend the newly found largesse. In effect, whether revenues rise or fall, the state is unable to expand existing programs.

This bleak scenario is brightened somewhat by the state's ability to redirect or redefine expenditures in such a way that additional revenues can be expended, if there is agreement on how that is to be done by the legislature and governor. Cheered by the hope that such a change could be made and was politically feasible, early reaction to the increase in projected revenues was elation. The governor's budget could now fully fund the cost-of-living adjustment, proposed reductions could be eliminated or substantially modified, and there was hope in the education community that because local school districts still had local capacity within their limits, the state could subvene these dollars to schools and possibly fund new reform initiatives.

These hopes were short-lived. The governor announced his intention to follow "the will of the people" in enacting the Gann limit and pledged to return $\$ 700$ million of the newly found surplus in the form of a rebate to taxpayers. In an attempt to use a portion of the money for schools, the governor also proposed that of the remaining $\$ 400$ million, $\$ 160$ million could be subvened to schools. Both the rebate and the increased allowance for expenditure required statutory authorization.

Normally the prospect of an additional $\$ 160$ million would be a pleasant one, but the needs of the schools were viewed as great. Education advocates, most notably the superintendent of public instruction, argued that all or a substantial portion of the $\$ 700$ million ought to go to the schools. The superintendent was joined by education lobbyists and the Democratic leadership of both houses. The governor and Assembly Republicans were equally committed that the $\$ 700$ million should all go toward rebates.

The form of the rebate was also an issue, with the
governor asserting that it should be returned to those who paid it, i.e., proportional to taxes paid. The Democrats contended that, if there had to be a rebate, it should be redistributional, i.e., either a flat amount or a reduction of the sales tax for a limited period. The legislature expeditiously passed SB 63 , authored by Senators Roberti and Lockyer, which would have reallocated the $\$ 700$ million to schools. The governor just as expeditiously vetoed it.

When the June 30 deadline for determining the amount of the Gann limit surplus passed, the legislature was unable to convince the governor that all the surplus should go to schools, and the governor was unable to persuade the legislature to approve his plan for a combination rebate-school support proposal.

In arguing for the full amount of the rebate, supporters of increased education expenditures believed that the public would rally to their cry for additional school funds and that a massive response from the people would force the governor and Assembly Republicans to drop their plans for a rebate. This strategy failed. First, the general public did not respond with sufficient pressure on the governor to cause him to reverse his position. Nor was the education lobby able to make any inroads into the loyal base of support the governor enjoys among Assembly Republicans. Even Senate Republicans who had been at the forefront of the original reform effort rallied around their governor on this issue.

Second, the business community, which was an active participant in the first reform effort, played no discernible role in this dispute and in fact tended to support the governor's position. Business officials began to echo the governor's allegations of mismanagement of the schools and to raise questions about the effectiveness of the reform movement.

The strategy was clearly a gamble and, at least in the short term, the gamble failed. Schools did not receive any of the $\$ 1.1$ billion in new money, thus necessitating further reductions in the final state budget presented to the governor. Governor Deukmejian ultimately won the battle over the nature of the rebate as well when the legislature, responding to the threat of a Republican-sponsored initiative that would have placed the question of a rebate on the ballot, agreed to a plan closely paralleling that originally proposed by the governor. The governor ultimately agreed to restore previous reductions in education urban impact money totaling $\$ 60$ million as part of the compromise package involving the question of the redistribution of the rebate.

Normally, in matters of great public import such as tax relief, prisons, and support for schools, the legislature and governor are able to design acceptable compromises. But in
this case the stormy relationship between a Republican govemor and Democratic leadership in the legislature, as well as the protracted dispute between the governor and superintendent of public instruction, produced a climate ill-suited to compromise. Frustrated school district officials watched this scenario play out without effective involvement. They were, for the most part, merely spectators in a much larger drama.

The Gann limit will continue to dominate state-level public policy for the foreseeable future, unless revenues take an unexpected nosedive (in itself a sorry prospect) or the Gann limit is repealed (highly unlikely) or amended. Several efforts are underway to modify the limit, primarily focused on altering the applicable inflation factor and the definition of population, the effect of which will be to increase allowable expenditures for state and local government entities, but the prospects for change are highly uncertain.

Attempts to amend the Gann limit may also founder on the unwillingness of public-sector proponents for change to appease the business community. The latter is generally supportive of a modification of Gann to define gas taxes and taxes on the sale of gasoline as user fees but is concerned about going beyond that limited purpose. The governor's position on possible amendments to the limit will obviously play an important role. He has historically opposed attempts to modify the limit but has recently expressed a willingness to reconsider that position after careful study.

## THE EDUCATION COALITION

For approximately 15 years, education politics in California have been heavily influenced by a coalition of lobbyists. Their frequent willingness to put aside the primacy of their specific interests for the good of the whole has been a hallmark of capital politics since the group's creation. There are signs that this coalition is beginning to unravel and that its ability to influence education policy is declining. There are several contributing factors.

First, the superintendent of public instruction, elected initially without the support of the members of this educationbased group, campaigned on a platform calling for massive school reforms. He followed with a powerful and popularly appealing reform agenda and used his considerable public relations talents and persuasive ability to build support for his agenda. As long as he was successful in garnering additional support for the schools, the education lobby was willing to support, at least tacitly, his initiatives. For the most part, the education lobby moved from central stage to a supporting role for the superintendent.

As the superintendent moved to the more difficult second "wave" of reform issues, those involving the quality of teachers and the quality of the teaching environment, it became clear that to implement those reforms he must have the approval and active support of the education lobby. This becomes increasingly difficult as there is little agreement among the lobby about appropriate approaches. For example, increased roles for teachers in school decision making may mean decreased roles for administrators and board members. There is not even agreement among teacher groups on key issues.

Second, there are signs that rank-and-file membership of the education lobbies are becoming more and more restive with the notion that they must submerge their own special interests for the welfare of the whole. This is not a remarkable trait for special interest groups. What is remarkable is that this effort at sustaining a coalition succeeded so well for so long.

Three examples of the unraveling of the coalition bear mentioning. Assembly Bill 660, authored by Assemblyman Leonard and sponsored by the United Teachers of Los Angeles (UTLA), proposed to amend the " 50 percent law," the law that requires that 50 percent of the "current expense for education" be expended for classroom instruction. The bill simply proposed that 50 percent be changed to 60 percent. Without substantial additional funds, school districts would be forced to reduce or eliminate other portions of the budget to meet the new requirement. Simply put, more teachers could mean fewer counselors, fewer librarians, fewer nurses, fewer classified employees, or a combination of these.

Introduction of this legislation was supported by the California Teachers Association (CTA) and opposed by the California School Boards Association (CSBA), the Association of California School Administrators (ACSA), the California School Employees Association (CSEA), and the Services Employees International Union (SEIU). The combination of a teacher-advocated proposal and a powerful and influential Republican author posed a possibility of passage and threw the coalition into disarray. The legislation was not successful, but at the same time that the important issues of the budget and the rebate were being debated in the legislature, education lobbyists were battling among themselves, which they had been largely able to avoid in the past.

A second example was a proposal by the governor, also carried by Assemblyman Leonard, that would have allowed local school districts to redirect a number of existing categorical funds to reduce class size. This bill was supported by several school superintendents. Proponents of the categorical programs-Democrats in the legislature who had historically
supported the notion that the state should direct the expenditure of these funds to meet the needs of selected groups and urban school districts-were angered.

A third sign of splintering occurred when three of the education lobby groups (CSBA, SEIU, and the PTA), concerned at the prospect that the rebate issue was gridlocked, called a press conference urging that a compromise proposal be adopted in which some of the rebate money would be allocated for education purposes.

In addition, the education lobby's efforts to gain a bigger piece of the fiscal pie were distracted by urban and rural district efforts to restore reductions in the 1987-88 budget for categorical programs that affected urban districts (Urban Impact Aid and Meade Aid) and small districts (small school transportation allowance). The inability of the education lobby to alter the outcome on the issues relating to the budget and the rebate, and growing signs of discord among key education support groups, presented a picture of a divided and weakened lobbying force for education.

## CATEGORICAL AID

Historically, California school finance has accommodated the often conflicting legislative tendency to earmark funds for specific purposes (e.g., Miller-Unruh Reading Program) or specific student populations (e.g., special education, gifted, bilingual) with the desire of districts to retain local control over their expenditures. These categorical programs, with different degrees of specificity, limit local district discretion in their expenditure. There has always been some tension between advocates of local control and advocates of direct state intervention. For the most part consensus has slowly evolved on the appropriate balance between these sometimes conflicting goals, often by increasing funds for both.

However, as resources become scarce, difficult choices must be made, and there is growing evidence that categorical programs will be more closely scrutinized by the governor and legislature, with modification and elimination of some lower priority programs a distinct possibility. For the most part, the governor has been less supportive of categorical programs than of general aid. His budgets have provided smaller inflation adjustments for categoricals than for the general program. On this, as on many other issues, the governor is in a strong political position.

Chapter 1270 of 1983 specifies that a number of categorical programs would "sunset" unless legislation was enacted to extend or repeal the date of their termination. Even if the legislature does not continue the program under review, the
program does not actually terminate. Instead, funding "shall continue for the general purposes of the program as specified in the provisions relating to its establishment and operation." Any funds appropriated are to be used for the intended purposes of the program, but relevant statutes and regulations (with some specific exemptions) cease to be effective. The sunset provision is designed to provide the legislature and governor with an opportunity to conduct a comprehensive review of the effectiveness of each program.

The two-thirds vote requirement to override vetoes, combined with the loyalty of Republican legislators, enables the governor to act with virtual impunity on the reauthorization of these programs. While specific legislation to abolish categorical programs would be doomed to failure in the normal legislative process, the sunset provisions place the governor in position to effectively control the conditions under which modifications to existing programs are made or even to abolish programs he believes are of lower priority.

The extent of the governor's prerogatives on this issue was effectively brought home by recent attempts to reauthorize several categorical programs, most notably the Bilingual Education Act. The governor, at the urging of Assembly Republicans in 1986, vetoed Assembly Speaker Willie Brown's AB 2813, which would have extended the effective date of the bilingual act, along with several other categorical programs. A new measure, AB 37, was introduced in 1987 extending the sunset date for an additional five years for seven categorical programs (School Improvement Program, Economic Impact Aid, Miller-Unruh, Special Education, Gifted and Talented Education, Native American Indian Education, and Bilingual Education). Assembly Republicans, disturbed by what they perceived to be the overly prescriptive nature of the provisions relating to bilingual education, unanimously signed a letter to the governor requesting a veto. The governor responded by vetoing AB 37 and calling for new attempts to forge an acceptable legislative compromise.

The governor apparently can resist indefinitely until he gets the provisions he desires. As a clue to a direction the debate may take, Assemblyman Ross Johnson introduced legislation abolishing all categoricals and redirecting the money saved for whatever purposes local districts may choose. Although the bill has no chance of passage, it may portend a future effort to liberalize the purposes for which categorical aid can be used. This strikes a responsive chord among some administrators and trustees who have bristled at the growing state intervention in local prerogatives. This idea also seems to be of interest to members of the governor's Commission on Educational Quality.

## THE ENHANCED ROLE OF THE GOVERNOR

Events of 1987 point to an entirely new and largely uncharted course for education in California. Casting the largest shadow is the Gann limit. Even if a new consensus on reform and additional dollars for schools were forged, the limit, unless changed or repealed, makes the prospects for renewal dim. Voters will be asked to decide in 1988 about any modifications to the limit, but prospects for its modification are reduced by the lack of private-sector commitment to change and uncertainty about the governor's willingness to support any alteration. Without successful voter modification of the limit, there are still statutory changes which could occur, but that would require the kind of legislative-gubernatorial cooperation that recently has been conspicuous by its absence.

The recently enacted and barely begun education reform effort is showing definite signs of slowing. None of the second "wave" of reforms has been approved. Moreover, impatience with the magnitude of current change, skepticism about school management practices, and concern about massive costs of additional reform have combined to convince the governor that he must play a leadership role in education policy development. He will be unwilling to do as he has in the past, that is, react to proposals developed largely without his participation by the education lobby, the legislature, and the state superintendent.

In 1987 the governor actively entered into the debate about the future of California education. He has promised that
he will have a program for education reform. To that end the governor appointed a 15 -member commission charged with the responsibility of creating a different vision for California schools. The governor's commission's objectives are:

- to identify specific reforms and education techniques that have been proven to work in California's exemplary schools and develop a plan to apply them statewide in all schools
- to simplify the complex school funding formulas that now exist and examine the effectiveness of Califomia's special categorical education programs
- tomake school districts and state education officials more accountable for sound financial planning and management practices
- to explore the use of financial incentives to encourage school compliance with both reforms and sound management practices
- to evaluate the need for greater school safety and suggest additional steps to rid school campuses of crime, drugs, and delinquency
The commission issued a preliminary report on December 18, 1987. A final report is due in 1988. Much of the future direction of education in this state, the nature and fate of the reform effort, the decline or fall of categorical aid, and the increase or decrease of local control and accountability will be influenced by this endeavor.


## chapter 3

# Enrollment and Student Characteristics 

In 1986-87, 122,000 more students attended California public schools than attended in 1985-86, including 71,000 additional Hispanics and 25,000 additional Asians. In 198788 , total K-12 enrollment reached 4.4 million, which represents a 2.3 percent increase over the previous year and an 8.8 percent increase since 1981-82, the low point of K-12 enrollment in the 1980s. By 1996-97 California's public school enrollment will equal the total enrollment in the nation's 25 smallest states.

Although enrollment is now increasing in every county, most of the growth is occurring in seven southern and central valley counties-San Bernardino, Riverside, Los Angeles, San Diego, San Joaquin, Fresno, and Sacramento. If new schools were built to house these students, each containing 20 classrooms of 30 students, 157 new schools, or 3,100 classrooms, would be required for this year's growth alone (Figure 3.1). Although some of these students can be accommodated in existing structures, extensive construction, double sessions, or year-round sessions will be required to house California's growing student population through the 1990s.

Over 34 percent of all K-12 students are enrolled in California's 25 largest school districts. Los Angeles County alone accounts for over 1.3 million pupils, more than onefourth of all California students. Another quarter of the state's students ( 1.1 million) live in Orange, San Diego, San Bernardino, and Santa Clara counties. Of these, only Santa Clara County is in the northern part of the state.

Enrollment in California is unevenly distributed across grade levels (Figure 3.2). The largest groups of students are enrolled in kindergarten and 1st grade, with another peak in 9 h and 10th grades. In fact, the enrollment increase in 9th grade accounted for 33 percent of public school growth in 1986-87. Compared with 1985-86, there were substantially more students at every level in 1986-87, except in grades 8,9, and 10. Nevertheless, high school dropout rates reduce totals for the 11th and 12th grades.

## HIGHLIGHTS

- K-12 enrollment growth is projected to average 140,000 additional students per year during the next five years.
- K-12 enrollment reached 4.4 million in 1987-88, a 2.3 percent increase over 1986-87.
- Enrollment for elementary and secondary public schools is projected to reach 5.65 million by 1996 97.
- Student enrollment is increasing in every county in California, with the heaviest enrollment growth concentrated in the southerm part of the state. If new schools were built to accommodate the growth, 157 new schools (or 3,100 new classrooms) would be required for 1988-89 growth alone.
- The largest enrollment growth is at the elementary level. Elementary enrollment is expected to increase from three million in 1986 to four million by 1996.
- Approximately 531,000 students attended private schools in the state in 1986-87, which translates into 10.8 percent of total school enrollment.
- The number of students who drop out or otherwise leave school remains high. Enrollment in this year's 12th grade class totaled just 77.2 percent of enrollment in last year's 11th grade class.
- The percentage of racial and ethnic minority students has increased consistently since 1967. Eighty percent of newly enrolled students in 1986-87 were Hispanic or Asian. By 1988-89, California public school enrollments will be composed of a "majority of minorities."
- Nearly one-quarter of California students speak a language other than English. Half of these students are English-proficient and half are limited-Englishcontinued
proficient (LEFP). In effect, one of every eight public school students is not proficient in English.
* By 1992, 250,000 pregnant and parenting teens are expected to live in California. While the birth rate for 16-18 year olds has declined, the birth rate for teens under age 14 continues to increase.
* The proportion of California children living below the poverty line has exceeded the United States proportion since 1982. Of female-headed households with a child under age 18, 46 percent or 300,000 families lived below the poverty level in 1986.

FIGURE 3.1 Additional Operating Costs and Classrooms Needed Due to Increases in Average Daily Attendance (ADA), 1988-1997

| Year | Additional <br> ADA | Added <br> Operating Costs <br> (millions) | Additional <br> Classrooms $^{\dagger}$ |
| :--- | :---: | :---: | :---: |
| $88-89$ | 120,100 | 560.9 | 3,132 |
| $89-90$ | 142,200 | 693.9 | 3,961 |
| $90-91$ | 179,600 | 915.9 | 5,184 |
| $91-92$ | 151,300 | 801.7 | 5,633 |
| $92-93$ | 167,600 | $1,051.6$ | 5,472 |
| $93-94$ | 154,600 | $1,018.5$ | 5,247 |
| $94-95$ | 130,700 | 905.8 | 4,891 |
| $95-96$ | 121,300 | 887.8 | 4,337 |
| $96-97$ | 112,100 | 868.0 | 3,896 |

${ }^{\dagger}$ Thirty students per classroom, ADA adjusted downward to reflect enrollment increases demanding additional space. ADA is higher than enrollment in this instance because it includes summer school, adult education, ROC/P, and county offices not included in the fall enrollment count.

SOURCE: PACE analysis based on Commission on State Finance Annual Long-Term General Fund Forecast, Spring 1987.

FIGURE 3.2 Public K-12 Enrollment by Grade


SOURCE: California Department of Finance, Population Research Unit.

Most enrollment growth is occurring at the elementary level, 4.1 percent for grades $\mathrm{K}-8$ versus 0.3 percent for grades $9-12$. The largest percentage increases occurred in grades K 4 (Figure 3.3). In addition, elementary enrollment is growing faster than in previous years. This year's 4.1 percent increase compares to last year's 2.8 percent rise. Enrollment increases will continue in elementary grades as the children of the babyboom cohort move into higher grades. However, since upper elementary enrollment is now lower than current secondary enrollment, enrollment decreases in secondary schools will continue over the short term. In 1990, secondary enrollment will begin to increase once more.

Secondary enrollment grew more slowly in 1986-87 (0.3 percent) than in 1985-86, when it was 1.8 percent. Larger 11th and 12 th grade classes result from larger cohorts passing through these grades. Percentages of students who drop out or otherwise leave school remain high. This year's 12 th grade class was 77.2 percent of last year's 11 th grade. The current 11th grade is 92.9 percent of the $1985-8610$ th grade. The number of students enrolled in 12th grade in 1986-87 was 101,475 fewer than would have been expected from the 198485 10th grade enrollment of 352,756 students, an attrition rate of 28.8 percent.

Eleventh grade enrollment may appear artificially high.

FIGURE 3.3 Public K-12 Enrollment by Grade, 1980-81 to 1986-87

| Level E | $\begin{gathered} \text { 1980-81 } \\ \text { Enrollment } \end{gathered}$ | $\begin{gathered} \text { 1981-82 } \\ \text { Enrollment } \end{gathered}$ | $\begin{gathered} \text { 1985-86 } \\ \text { Enrollment } \end{gathered}$ | $\begin{aligned} & \text { 1986-87 } \\ & \text { Enrollment } \end{aligned}$ | Percent Change Between 1981-82 and 1986-87* | Percent Change Between 1985-86 and 1986-87 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K-12 | 4,076,421 | 4,046,156 | 4,255,554 | 4,377,989 | 8.2 | 2.9 |
| K | 288,101 | 300,239 | 360,210 | 380,608 | 26.8 | 5.7 |
| 1 | 291,179 | 298,341 | 350,046 | 374,272 | 25.5 | 6.9 |
| 2 | 278,041 | 287,652 | 325,825 | 343,780 | 19.5 | 5.5 |
| 3 | 285,299 | 282,464 | 320,083 | 330,354 | 17.0 | 3.2 |
| 4 | 305,299 | 290,323 | 308,202 | 325,902 | 11.5 | 5.7 |
| 5 | 319,418 | 310,874 | 303,277 | 314,258 | 1.1 | 3.6 |
| 6 | 315,095 | 324,324 | 299,902 | 308,678 | -4.8 | 2.9 |
| 7 | 304,795 | 322,264 | 304,180 | 312,983 | -2.9 | 2.9 |
| 8 | 302,739 | 307,429 | 307,778 | 304,787 | -. 9 | -1.0 |
| Other Elementary | y 67,201 | 45,878 | 47,202 | 50,062 | 9.1 | 6.1 |
| Subtotal |  |  |  |  |  |  |
| Elementary 2 | 2,757,708 | 2,769,788 | 2,926,705 | 3,045,684 | 10.0 | 4.1 |
| 9 | 327,029 | 326,143 | 363,733 | 348,672 | 6.9 | -4.1 |
| 10 | 332,489 | 334,287 | 367,941 | 363,756 | 8.8 | -1.1 |
| 11 | 317,141 | 311,518 | 325,690 | 341,809 | 9.7 | 4.9 |
| 12 | 274,831 | 280,818 | 243,398 | 251,281 | -10.5 | 3.2 |
| Other Secondary | 67,223 | 23,602 | 28,087 | 26,787 | 13.5 | -4.6 |
| Subtotal |  |  |  |  |  |  |
| Secondary 1 | 1,318,713 | 1,276,368 | 1,328,849 | 1,332,305 | 4.4 | 0.3 |

*The year 1981-82 represents the recent low point of K-12 enrollment. Comparisons of enrollment growth using 1981-82 as a base more accurately reflect total enrollment growth experienced in the 1980s.

SOURCE: California Basic Educational Data System (CBEDS).

One possible explanation centers around administration of the California Assessment Program (CAP) test. Under new state regulations, many schools have redefined their technical requirements forbecoming a "senior." As a result, students who would formerly have been classified as seniors are now sometimes counted as juniors. The percentage of students moving from 9 th to 10 th grade increased slowly over the past 10 years, as did the percentage moving from 10th to 11th grade. In contrast, the percentage moving from 11th to 12 th grade declined 10 percent, with the largest declines in the last three years, the period during which new testing requirements have been in force. During the same period, the percentage of seniors actually graduating increased from 86 percent in 1981 to 94 percent in 1985. Either students, reclassified to avoid testing, are graduating six months later, or the reclassification reduces the senior class to that proportion most likely to graduate.

## ENROLLMENT PROJECTIONS

Elementary enrollment is expected to increase from 3 million in 1986 to 4 million in 1996. During the same period, enrollment in grades 9 to 12 is expected to increase from 1.3
million to 1.6 million. By 1996, 16,600 more students will be enrolled in elementary schools (K-8) than were enrolled in all public schools (K-12) in 1981. The State Department of Finance anticipates that an additional 1.35 million students (equal to the current enrollment in Los Angeles County) will attend public schools in 1996 compared with 1986, a 25 percent increase (Figure 3.4). Peak enrollment in 1st grade is anticipated in 1993, after which enrollment is expected to decline once again. This is based on an anticipated decline in the birth rate projected to begin in 1987.

Student populations are increasing most rapidly in southem and central valley counties (Figure 3.5). The largest rates of growth are predicted to occur in the following counties: Riverside ( $62.7 \%$ ), San Bemardino ( $58.0 \%$ ), San Joaquin ( $55.6 \%$ ), Kern (42.2\%), Sacramento (42.1\%), Stanislaus (38.7\%), Tulare (35.7\%), and Fresno (35.5\%). These counties also have large proportions of Hispanics.

While Los Angeles County student enrollment is predicted to increase by "only" 24.8 percent between 1986 and 1996, this represents more than 300,000 new students, a monumental increase in absolute numbers for one county to absorb. In the next 10 years, Los Angeles County will require an additional 10,000 classrooms ( 30 students per class) to

FIGURE 3.4 Public School Enrollment Trends and Projections


SOURCE: California Department of Finance, Population Research Unit.


Note: Northern California = counties of Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Nevada, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, and Yuba.

Central California = counties of Alameda, Alpine, Amador, Calaveras, Contra Costa, El Dorado, Fresno, Inyo, Kings, Madera, Marin, Mariposa, Merced, Mono, Monterey, Napa, Placer, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Tulare, Tuolomne, and Yolo.

Southern California = counties of Imperial, Kern, Los Angeles, Orange, Riverside, San Bernadino, San Diego, San Luis Obispo, Santa Barbara, and Ventura.
house these students.
By comparison, enrollment in the five San Francisco Bay Area counties and in the counties of Northern California is expected to increase less rapidly. While enrollment growth is a key characteristic of California education, growth is much more rapid in Southern California and in central valley counties than in the northern part of the state.

## PRIVATE SCHOOL ENROLLMENT

In 1986-87, there were approximately 531,000 students enrolled in California private schools, a decrease of approximately 6,000 students from 1985-86. Figure 3.6 displays the relationship between private school enrollment and total enrollment. The proportion of students enrolled in private schools increased to a peak of 11.7 percent in 1983 but declined in each of the next three years. Figure 3.7 indicates that this is the result of relatively stable private school enrollment during a period of rising public school enrollment. In fact, the number of students attending private school decreased somewhat between 1985-86 and 1986-87 in all grades except kindergarten and 11-12 (Figure 3.8).

With a private school enrollment of over 207,000 , Los Angeles County accounts for approximately 39 percent of all students attending private schools. This high percentage not only reflects the concentration of total population in Southern California but also indicates that private schools are themselves disproportionately concentrated in the southern part of the state.

More than twice as many kindergarten students as seniors attend private schools. This pattern probably reflects both preference and price issues. Many families prefer tosend their children to private schools for preschool and early elementary and subsequently transfer them into public schools. Some of this difference may be associated with the fact that private schools frequently provide childcare in addition to instructional services. (At least one suburban public school district observed that fewer out-of-district permits were requested when public schools provided school-site childcare.)

Private school costs also increase by grade level, thus making private secondary education more expensive than its elementary counterpart. However, as Figure 3.8 shows, private school enrollment in grades 11 and 12 increased between 1985 and 1986. Many parents apparently believe that

FIGURE 3.6 Private Enrollment as a Percent of Total Enrollment, 1975-86


SOURCE: California Basic Educational Data System (CBEDS).

FIGURE 3.7 Trends in California Public and Private School Enrollment, 1976 through 1996
Number of Students (millions)


SOURCE: California Department of Finance.

FIGURE 3.8 Private School Enrollment by Grade


SOURCE: California Department of Finance, Population Research Unit.
the additional expense of secondary tuition is warranted, since enrollment in grades 11 and 12 exceeded what would have been expected using grade progression ratios alone.

Just over 75 percent of students enrolled in private schools attend church-affiliated schools. Of those students, 61.6 percent (or 46 percent of all private school students) attend Roman Catholic schools; this percentage is down from 61.9 percent in 1984-85.

It is difficult to predict how the relationship between private and public school enrollment will evolve. A larger percentage of school-age children are from poor, minority, and immigrant families, which historically have been underrepresented in private schools. Nevertheless, Hispanic families, even those with low incomes, have often preferred to send their children to parochial schools. As the proportion of Hispanics in the total population increases, private school enrollment may also increase if neighborhood parochial schools are available.

In addition, black families increasingly send their children to parochial schools, even though frequently they are not themselves Catholic, in order to obtain what may be perceived as an education superior to that offered in local public schools.

Thus, the effect of the increasing proportion of children from poor, minority, and immigrant families on private school enrollment may be mixed. The trend of the recent past, during which public school enrollment has increased while private school enrollment has declined both in absolute numbers and as a percentage of total enrollment, may not continue.

## MINORITY ENROLLMENT

Ethnic and racial minorities compose an increasingly large number and proportion of Califomia's public school enrollment. In 1986-87, 2.1 million students, or 49 percent of total public K-12 enrollment, were members of racial orethnic minority groups.

Indeed, as Figure 3.9 indicates, the percentage of racial and ethnic minority students enrolled in California's public schools has increased consistently since 1967. Further, in recent years minority students have accounted for the bulk of new enrollment. Eighty percent of newly enrolled students in 1986-87 were either Hispanic or Asian. While the rate of minority enrollment growth seems to be declining, minorities as a percent of total enrollment would exceed 50 percent today

FIGURE 3.9 Growth in Minority Enrollment as Percent of Total Enrollment, 1967 to 1987


SOURCE: Department of Finance, Population Research Unit.
if minority dropout rates were not so high. The white, nonHispanic majority is currently 51 percent, falling from just over 70 percent in 1971. This number is likely to fall below 50 percent by next year, making California public school enrollment composed of a "majority of minorities."

The percentage of minority enrollment differs by grade level. It is above 50 percent in elementary grades and drops toits lowest point in 12th grade. Figure 3.10 demonstrates that the minority composition of school enrollment changed markedly between 1971 and 1986. The proportion of blacks is virtually unchanged at just over 9 percent. Hispanic representation increased from 16 percent in 1971 to 29.6 percent in 1986.

The largest rate of increase in school enrollment is for students of Asian and Pacific Island backgrounds, followed by Hispanics. Filipino enrollment also has been growing at a rapid rate. Although still a relatively small proportion of total enrollment, Asian and Pacific Islander enrollment has increased most rapidly, from 2.2 percent to 7.5 percent of the total, or approximately 240 percent. Filipino enrollment increased from 1.1 percent to 2 percent of total student population.

Preliminary reports from the Los Angeles County Office of Education indicate that in 1987 there was a substantial decline in districts with large Hispanic enrollments. ${ }^{1}$ It remains to be seen whether students have gone to other districts, are remaining home, or have returned to Mexico with their families because of the 1987 immigration law. Although the new immigration law may result in a lower rate of increase in the near term, political and economic instability in Latin America and the Philippines may once again lead to increasing enrollment from these areas in the future.

While there has been much discussion of the performance of minorities in the public school system, little analysis has been conducted of minority performance disaggregated by generation and by rural/urban origins. These kinds of analyses are important because new immigrants need to learn both a new language and a new culture before being able to perform well in school. The difficulty of this task is often compounded if immigrants are from rural as opposed to urban areas.

As Conditions of Education in California, 1986-87 reported, attendance rates and performance for students of Mexican descent improve each year toward the norm for all Californians. Enrollment in public elementary and secondary

FIGURE 3.10 Percent of Total K-12 Enrollment by Ethnic Group, 1971-72 and 1986-87


SOURCE: California Basic Educational Data System (CBEDS).
schools for children of Mexican-born parents reflects the norm for all Californians by the second generation. Similar data for other immigrant subgroups could help identify enrollment patterns and trends across generations and disentangle long-term effects from short-term difficulties shared by all new immigrants.

## LANGUAGE MINORITIES

Reflecting the diversity of California's public school student population, about one-quarter of enrolled students speak a language other than English. About half of these students are English-proficient and half are limited-Englishproficient (LEP). Approximately 13 percent of students $(600,000)$ were limited-English-proficient in 1987. The majority of these students- 67.6 percent-attended school in nine southern counties. Los Angeles County alone enrolled more than 240,000 LEP students, accounting for 46 percent of the statewide total. The vast majority of students speak Spanish as their first language, as Figure 3.11 indicates.

Figure 3.12 displays the rapid, steady growth in the number of LEP students in California's public schools over the past decade. The number has nearly tripled from about 230,000 in 1977 to approximately 600,000 in 1987 . While approximately 50,000 students become English-proficient each school year (or are reclassified as English-proficient), more than 70,000 LEP students enroll in kindergarten each year, and additional students are identified as limited-Eng-
lish-proficient in upper grades.
The number of LEP students will almost certainly continue to increase, at least over the next 5 to 10 years, although the new immigration law may substantially reduce the rate of growth, as explained in the previous section. Predictions have been as high as 650,000 students by 1990 and almost 900,000 by the year 2000. Of course, these figures are determined to a large degree by immigration policies and practices. If immigration patterns change, LEP student populations will change also.

## INTER-ETHNIC DIFFERENCES IN SCHOOL ATTENDANCE AND GRADUATION

Not only have the numbers and percentages of minority students relative to total enrollment increased, but there has been a steady growth, as well, in the proportion of minority students attending racially isolated schools. Previously this indicated racial isolation in a system dominated by white students. Now a variety of races predominate, and soon the entire system will be composed of a "majority of minorities."

The number of minority students attending schools in which minorities constituted 50 percent or more of the enrollment increased from 500,000 in 1967 to 1.4 million in 1984. The number and proportion of white students attending these schools also increased between 1967 and 1984. The percentage of Hispanic students in racially isolated schools increased from 33 percent to 48 percent.

FIGURE 3.11 Number of Limited-English-Proficient Students by Primary Language, 1987 (thousands)


SOURCE: State Department of Education, Bilingual Education Unit.

FIGURE 3.12 Growth in Number of Limited-English-Proficient Students in California's Public Schools, 1977-1987


SOURCE: California State Department of Education.

The percentage of black students attending racially isolated schools also increased, from 75 percent in 1967 to 77 percent in 1984. However, blacks are becoming a relatively smaller proportion of California's minority student population.

When statistics were first compiled in 1967,49 percent of California's minority students attended schools in which minority enrollment exceeded 50 percent. In 1984, 70 percent of California's minority students were enrolled in racially isolated schools in 355 districts. In 1967, 987 schools were racially isolated, compared with 2,694 in 1984. The number of districts having racially isolated schools increased from 212 in 1967 to 355 in 1984, a 67 percent increase. However, the minority student proportion of total enrollment in racially isolated schools has declined in the intervening 17 years.

For the state as a whole, the proportion of graduates differs substantially by ethnic group. This can be seen when graduates are compared with corresponding 10th grade enrollment (Figure 3.13). Approximately 50 percent of both black and Hispanic students enrolled in 10th grade in 1984-85 failed to graduate from high school three years later. That compares with 19 percent of Asian and 29 percent of white students.

The proportions of high school graduates from various ethnic groups that meet University of Califormia and California State University entrance requirements is discussed in chapter 6, Curriculum and Special Programs.

This issue is not of merely academic or political interest. Nationally, higher dropout rates and lower performance have been observed in schools in which minority and poor students predominate. This is also true in California districts with high proportions (more than 50 percent) of enrollment of students from minority groups. Furthermore, adjusted lifetime income for a high school dropout has been estimated to be $\$ 187,000$ less for males and $\$ 122,000$ less for females than for high school graduates. ${ }^{2}$ Additional costs in lost tax revenues and welfare and unemployment expenditures can be traced to the individual and social costs of dropping out.

If only half of the seniors who failed to graduate with their high school class in 1986-87 had completed school, and if the graduates were equally distributed between male and female, then an additional $\$ 1.7$ billion in adjusted lifetime income might have been anticipated for California's economy. If half of the 1984-85 10th grade class members who failed to graduate with their high school class in 1986-87 had completed school, then an additional $\$ 9.6$ billion in adjusted lifetime income might have been anticipated. These computations are based on several critical assumptions regarding the state's overall economy and the nature of the individuals dropping out. However, these figures suggest the range of funds that might be considered in establishing cost effective dropout prevention programs.

FIGURE 3.13 Tenth Graders (1984-85) and Graduates (1986-87) by Ethnic Group


SOURCE: California Department of Finance.

## FAMILY COMPOSITION AND INCOME

Despite widespread impressions to the contrary, the vast majority of California children-about 75 percent-live in households where two parents are present. About one in five California children lives in households where only the mother is present, a figure which also holds for the nation and which has shown only a small increase in recent years. However, for children in poverty, only half live in two-parent families.

There are sharp differences in this aspect of family structure among the major ethnic groups in California that are not simply a reflection of socioeconomic status. Seventyeight percent of white children live in families where both parents are present. The figure is even higher for Asians ( $82 \%$ ), but for Hispanics it is 72 percent and for blacks only 46 percent.

Of female headed households with a child under 18 years, 46 percent or 300,000 families lived below the poverty level
in 1986. Of female headed households with children under 6 years of age, 59 percent or 161,000 had incomes below the poverty standard. This represents a lower percentage but a larger number than in 1977 (Table 3.14). As Table 3.15 displays, in 1986 single women with children earned less per hour than their female counterparts with spouse and children, and less than the average hourly wages for males and females.

As Table 3.16 indicates, median incomes for those in the lowest income quintile fell between 1977 and 1986, while median incomes for those in the fourth and fifth quintiles increased much faster than the rate of inflation. A family in the highest quintile earned $\$ 8,000$ more in 1986 than in 1977. Not only is the number of children from families earning below poverty-level incomes increasing, their relative situation is worse compared to a decade ago.

The proportion of California children below the poverty line has exceeded the U.S. proportion since 1982. While both California and U.S. proportions increased until 1982, the

FIGURE 3.14 Women Householders Without Spouse

|  | With Child Under 18: |  |  | With Child Under 6: |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Below Poverty | Total Number |  | Below Poverty | Total Number |  |
| 1977 | 240,000 | 565,000 | 42.5\% | 105,000 | 168,000 | 62.5\% |
| 1981 | 239,000 | 583,000 | 41.0\% | 116,000 | 199,000 | 58.3\% |
| 1986 | 300,000 | 648,000 | 46.3\% | 161,000 | 275,000 | 58.5\% |

SOURCE: Current Population Survey, California State Census Data Center.

FIGURE 3.15 Women's Hourly Wages, 1986

| Hours Worked <br> per Week | Men's <br> Wages | Women's <br> Wages | Women with Spouse <br> and Children | Single Women <br> with Children |
| :--- | :---: | :---: | :---: | :---: |
| $35+$ | $\$ 10.00$ | $\$ 7.21$ | $\$ 7.32$ | $\$ 6.40$ |
| $20-34$ | $\$ 8.57$ | $\$ 6.87$ | $\$ 7.20$ | $\$ 6.38$ |
| $1-19$ | $\$ 7.27$ | $\$ 6.35$ | $\$ 7.07$ | $\$ 5.00$ |

SOURCE: Current Population Survey, Califomia State Census Data Center.

FIGURE 3.16 Income of All California Families With Children, 1977-1986

|  | Median Income of Quintile |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { I } \\ (1-20 \%) \end{gathered}$ | $\begin{gathered} \text { II } \\ (21-40 \%) \end{gathered}$ | $\begin{gathered} \text { III } \\ (41-60 \%) \end{gathered}$ | $\begin{gathered} \text { IV } \\ (61-80 \%) \end{gathered}$ | $\begin{gathered} \mathrm{V} \\ (81-100 \%) \end{gathered}$ |
| 1977 | 9,796 | 18,988 | 28,879 | 39,783 | 61,167 |
| 1978 | 9,915 | 19,137 | 30,113 | 41,697 | 62,964 |
| 1979 | 9,800 | 19,827 | 30,113 | 43,129 | 67,110 |
| 1980 | 9,639 | 19,413 | 29,703 | 43,734 | 69,675 |
| 1981 | 9,396 | 19,148 | 29,050 | 41,233 | 63,254 |
| 1982 | 8,406 | 17,678 | 27,663 | 39,934 | 65,401 |
| 1983 | 8,211 | 17,354 | 27,116 | 39,857 | 67,223 |
| 1984 | 8,274 | 17,672 | 27,493 | 40,131 | 66,813 |
| 1985 | 9,098 | 19,280 | 29,029 | 41,943 | 68,488 |
| 1986 | 8,919 | 19,682 | 29,892 | 43,673 | 69,662 |
| Net Change | -9.0\% | 3.7\% | 3.5\% | 10.0\% | 14.0\% |
| (Constant 19 | ollars) |  |  |  |  |

SOURCE: Current Population Survey, California State Census Data Center.

FIGURE 3.17 Proportion of California and United States Children Below the Poverty Line, 1969-1986


SOURCE: Current Population Survey Profile, 1986, California State Census Data Center.
proportion of California children living in families with incomes below the poverty level increased in three of the last four years, as indicated in Table 3.17. The average percentage of children living in poverty in California is 18 percent per county.

## PREGNANT AND PARENTING TEENS

Teen pregnancy has been associated with increased dropout rates for women, especially for those of Hispanic origin. Although teen birth rates have dropped consistently since 1970 for those between 16 and 18 years of age, the rate for 15 -year-olds has remained relatively stable. However, the birth rate for teens under 14 has actually increased during the same period. If that trend continues as the larger age cohorts reach puberty, then larger and larger numbers of babies will be born to mothers age 14 and under.

Approximately 18,000 students attended programs for pregnant and parenting teens in 1985-86, which represents 11.7 percent of the estimated population of 157,000 pregnant and parenting teens 18 years old and younger. The estimated proportion of students, by racial or ethnic group, attending the programs differs from the proportion of the group in the population of teen mothers and in the population of female students less than 18 years old. Although the State Department of Health Statistics collects comprehensive data on live births and infant deaths, there is no comparable data on school attendance for this group.

The proportion of students attending programs in 1985 was estimated from a telephone survey of 140 programs for teen mothers conducted by PACE for the Assembly Office of Research. By 1992,250,000 pregnant and parenting teens are expected to live in California (Figure 3.18). A clearer understanding of the extent to which teen mothers attend school and

FIGURE 3.18 Pregnant and Parenting Females 18 Years of Age and Under, Actual and Projected, 1985 to 1992


SOURCE: PACE 1987.
receive special services, whether childcare or parenting classes, would assist policy makers in improving services to this specific population.

## TEENS WITH AQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

As of September 1987, 36 children in California age 13 years and under had diagnosed cases of AIDS. Although relatively few students of high school age (24) had diagnosed cases of AIDS, it is estimated that an additional 220 adolescent students are carrying the AIDS related complex (ARC) and AIDS. Comprehensive education programs at all school
levels might be useful in halting the spread of the disease in the sexually active adolescent population.
${ }^{1}$ Angel Sanchez, Findings from Survey of School District Enrollments, Fall 1987 (Los Angeles, CA: Los Angeles County Office of Education, in press.)
${ }^{2}$ James S. Catterall, "On the Social Costs of Dropping Out of School," (Stanford Education Policy Institute: Stanford University, Stanford, California, 1985) in Andrew Hahn and Jacqueline Danzberger, Dropouts in America: Enough is Known for Action (Washington, D.C.: Institute for Educational Leadership, March 1987).

## chapter 4

## Human Resources

California public schools (K-12) employed 224,346 licensed professionals in 1986-87. This number, which represents a 3.6 percent increase in professional staff over the prior year, includes classroom teachers, administrators, "specialists," and other nonteaching professionals. The average certificated employee in California is 43 years old and has 15 years experience in the field of education. More than one-third ( $36 \%$ ) of California teachers and nearly 90 percent of school administrators have earned master's degrees, exceeding the minimum professional preparation required for their positions. Education remains a full-time job for most California school professionals. The number of part-time certificated personnel declined from 6.1 percent in 1985-86 to 3.4 percent in 1986-87.

As the student population shifts, reflecting California's changing demographics, the composition of the professional staff is also changing, though slowly. Although 80 percent of the certificated staff is white, minorities continue to make gains in both teaching and administration. Teaching, however, remains a female-dominated occupation (67 percent of California teachers are women), while most administrative positions ( $61 \%$ ) are filled by men.

The debate begun in 1983 about how to upgrade the teaching profession continues. "What steps can and should the state take to attract academically able people into teaching and retain the competent teachers who are now in the classroom?" continues to be a central policy question. At the same time, demographic and fiscal realities continue to make a teacher shortage possible.

California is taking steps to stem the exodus of talented teachers from the classroom, encourage promising college students to choose a teaching career, and ensure a higher caliber of teacher credential candidates. Increased teacher salaries, institution of the preservice California Basic Educational Skills Test (CBEST), a state-sponsored loan forgiveness program for prospective teachers (APLE), and experiments with alternate routes to certification (teacher trainees) are affecting the number and quality of California's professional educators. These and other issues are explored in this chapter on California's teachers and administrators.

## HIGHLIGHTS

- In 1986-87 the average California teacher salary was \$31,170.
- California is taking specific steps to stem the exodus of talented teachers from the classroom, encourage promising college students to choose a teaching career, and ensure a higher caliber of teacher credential candidates.
- While the state hired more new teachers in 1986-87 than it did the previous year, California continues to experience a shortfall of qualified teachers. Between 15,000 and 17,000 new teachers will be needed in each year between now and 1990 to meet the personnel demand created by growth and attrition.
- More attractive wages and working conditions in private industry, especially for individuals trained in mathematics and science, have resulted in particularly intense teacher shortages in these areas.
- Teachers' salaries, while increasing for the last several years, have approximately kept pace with inflation, when compared to 1978 purchasing power.
- California continues to issue an enormous number of emergency credentials. Emergency credentials represented 20 percent of all first-issue and added credentials in 1985-86.
- Califormia's teaching force remains largely white ( $80.6 \%$ ) and primarily female ( $67 \%$ ).
- Minorities are not currently being attracted to the teaching profession in large numbers. Less than 15 percent of the individuals who completed teacher preparation programs in 1986-87 in the California State University system (which prepares 70 percent of California's teachers) were members of a minority group.
- California's average pupil-teacher ratio remains the second highest in the country.
- The trend of continued improvement in the passing rate on the California Basic Educational Skills Test (CBEST) was maintained. Importantly, more nonwhites took the test in 1986-87 than in 1985-86.


## PROFILE OF CALIFORNIA TEACHERS

California employed 192,424 classroom teachers in 1986-87, an increase of 3.3 percent over the previous year. This number represents 85.6 percent of all certificated employees serving in California schools. Most teachers are white (80.6\%). Hispanics continue to constitute 6.7 percent of the teaching force. The state employed slightly fewer black teachers ( $6.2 \%$ ) in 1986-87 than it did in 1985-86(6.7\%). Men compose barely a third of the K-12 teaching population ( $32.8 \%$ ) but still dominate numerically in the high schools, accounting for nearly 60 percent of high school teachers. The percentage of male math and science teachers, however, continues to decline. Men now compose 61.4 percent of math teachers and 66.5 percent of science teachers, a decline in each category of approximately two percent from last year, continuing the downward trend of male representation in these fields evident over the last five years.

The average California teacher is 42 years old and has taught for at least 15 years (Figure 4.1). Eighth grade teachers are somewhat less experienced than the average ( 13 years),
while high school social studies teachers tend to be the most experienced ( 17 years). Given the age of California teachers, many school districts, including large ones such as San Francisco in the north and small ones such as Newport-Mesa in Southern California, expect that as many as half of their teachers will retire within the next five years.

More than one-third (36\%) of California teachers hold master's degrees. Of these, nearly two-thirds ( $63.6 \%$ ) have master's degrees plus at least 30 additional units of postgraduate education.

The 1986-87 average teacher salary in California was $\$ 31,170$, reflecting an approximate six percent increase over 1985-86 and a 73 percent increase since 1979-80. This figure compares favorably with the recently calculated national teacher salary average of $\$ 26,704$ (Figure 4.2). ${ }^{1}$ However, when California salaries are adjusted for the state's higher cost of living, the adjusted average salary is $\$ 27,285$, or just $\$ 581$ above the national average. ${ }^{2}$ Califomia continues to rank fifth among all states in teachers' salaries. The purchasing power of teacher salaries, however, is approximately the same in 1986-87 as it was in 1979-80 (Figure 4.3).

FIGURE 4.1 California Teachers' Years of Experience, 1986-87


SOURCE: California Basic Educational Data System (CBEDS).

FIGURE 4.2 Average Classroom Teacher Salaries, Selected States and Years (nominal dollars)

|  | $1969-70$ | $1979-80$ | $1982-83$ | $1986-87$ |
| :--- | ---: | ---: | ---: | ---: |
| California |  |  |  |  |
| Texas | $\$ 10,324$ | $\$ 18,020$ | $\$ 24,035$ | $\$ 31,170$ |
| New York | 7,277 | 14,132 | 19,550 | 25,308 |
| Illinois | 10,390 | 19,800 | 25,000 | 32,620 |
| Pennsylvania | 9,569 | 17,601 | 22,315 | 28,430 |
| Michigan | 8,858 | 16,520 | 21,178 | 27,429 |
| National Average | 9,823 | 19,285 | 26,556 | 31,500 |
|  | 8,635 | 15,966 | 20,715 | 26,704 |

Note: Comparisons are made among large states with diversified economies and similar costs of living.

SOURCE: National Education Association, Estimates of School Expenditures.

Nearly 8,000 teachers $(7,680)$ began their teaching careers in California schools in 1986-87. This number represents a 13.3 percent increase in new hires over last year. New teachers were hired to accommodate both the retirement of 6,335 experienced teachers and the state's rapidly increasing student enrollment.

Beginning teachers were paid an average starting salary in $1986-87$ of $\$ 20,780$, up eight percent from 1985-86. Beginning teachers in California public schools fared considerably better financially than did their private school counterparts. The average annual starting salary in 1986-87 for a private school teacher in California, who did not possess a teaching credential, was $\$ 13,000$. Beginning private school teachers with teaching credentials earned $\$ 14,300$, or 31 percent less than their public school colleagues.

Not surprisingly, given their experience levels, the majority of California teachers are tenured. From kindergarten through grade 12 , in every grade and subject area, at least 70 percent of California teachers have attained tenure status. The highest number of probationary untenured teachers can be found in the 7 th and 8 th grades. Nearly a quarter of the teachers - in each of these grades has taught for less than two years.

## ADMINISTRATOR PROFILE

The average California school administrator is white ( $78.5 \%$ ), male ( $61 \%$ ), and has at least 19 years of experience in education. More than 40 percent of all California school administrators ( $43 \%$ ) have been in the field of education for more than 20 years.

Minorities represent a larger share of administrator positions than teacher positions. In 1986-87, 8.7 percent of all administrators were black, 9 percent were Hispanic, and another 3.8 percent represented other minority groups, for a total of 21.5 percent minority administrators.

The number of female principals decreased slightly, down from 32 percent in 1985-86 to 30 percent in 1986-87, but the number of female superintendents increased during this same period from 6.3 percent to nearly 10 percent. The average female administrator earned $\$ 4,000$ less than her male counterpart last year and had three years less experience in education.

California's 16,725 administrators make up 7.5 percent of the total K-12 certificated staff. The state's total complement of school administrators, as a proportion of the total education work force, is higher than the national average. According to a recent report in The Executive Educator, administrators compose 6.6 percent of the total certificated staff in school districts in most states. ${ }^{3}$ Nearly 90 percent of California administrators hold at least a master's degree. Twelve percent hold doctorates.

## CREDENTIALS AND ASSIGNMENTS

## Credentials

The state agency authorized to license teachers, the Commission on Teacher Credentialing (CTC), issued 90,962 teaching credentials in 1985-86, the most recent year for which data are available. ${ }^{4}$ This number includes all multiple-

FIGURE 4.3 Average California Teacher Salaries, 1970-1986, Adjusted for Inflation and for Increasing Experience Level of Workforce

$\square$ Average Teacher Salary (Unadjusted)Average Purchasing Power (Salary Adjusted by Califomia CPI, $1970=100$ )

- Average Power Adjusting for Increasing Experience Level of Workforce

SOURCE: PACE analysis of California Basic Educational Data System (CBEDS) data.
(elementary) and single-subject (secondary) credentials, children's center permits, administrative services credentials, pupil personnel credentials, specialist credentials in areas such as bilingual education and special education, and emergency credentials.

In all, the state issued 17.3 percent more credentials in 1985-86 than in 1984-85. The number of multiple-and singlesubject credentials, the basic credential for K-12 classroom teachers, increased by nearly 21 percent.

Not all credentials represent new people entering the teaching profession. More than one-fifth of experienced teachers ( $21 \%$ ) added new specialized credentials to their existing certificates.

The state continues to issue a large number of emergency credentials (Figure 4.4). Emergency credentials represented 20 percent of all Ryans first-issue and added credentials issued by CTC in 1985-86. This number reflects a decrease from

1984-85, when fully one-quarter of the credentials issued were emergency certificates. Among first-issue multiple-and single-subject credentials issued in 1985-86, 14 percent were emergency credentials. More than one-quarter of all added credentials ( $28 \%$ ) were emergency certificates.

The large number of emergency credentials is particularly significant in the areas of special education and bilingual education. In 1985-86, 21 percent of all special education credentials issued were emergency certificates, an increase of five percent over 1984-85. Nearly one-third of the bilingual credentials issued in 1985-86 (32.4\%) were emergency credentials, up more than six percent from 1984-85. Moreover, a PACE analysis of California Basic Educational Data System (CBEDS) data reveals that 60.5 percent of the teachers who are teaching classes designated by school districts as "bilingual" do not possess bilingual credentials.

The bilingual credential problem may be further compli-

FIGURE 4.4 Percent of Elementary and Secondary Teaching Credentials that are Emergency


Note: "First-issued" credentials are granted to individuals who have never been licensed to teach. Added credentials are granted to licensed educators who have become authorized to teach in new subject areas or to perform additional services in areas for which they were not previously licensed.

SOURCE: "Credential Profile, 1981-84," "Credential Profile, 1984-85," and "Credential Profile 1985-86." (Sacramento, CA: Commission on Teacher Credentialing).
cated by the governor's 1987 veto of legislation designed to extend the bilingual education statute under which schools operated in 1985-86. Under the previous law, school districts were allocated bilingual funds to which were tied specific regulations, including the requirement to hire bilingual teachers. Under current law, school districts continue to receive money for the "general purposes" of bilingual education, but individual districts are authorized to determine how they wish to use that money.

It seems likely that, at least for the present, districts will continue to use state bilingual money to hire bilingual teachers for fear of being sued under the Lau v. Nichols court decision if they change their method of providing instruction to lim-ited- and non-English-speaking students. The shortage of fully certified bilingual teachers, however, adds another question mark to the shape and future of bilingual education programs in California.

The subjects for which preliminary single-subject credentials were most often issued in 1985-86 were English, followed by social science, physical education, mathematics, and life science, repeating the same pattern as the prior year. The subjects for which emergency credentials were most frequently issued were mathematics, followed by English, physical science, life science, and social science.

The number of administrative credentials issued in 198586 increased by more than 10 percent, to 4,822 . This increase in the number of credentialed administrators is somewhat surprising in light of a 1984 PACE study which predicted a surplus of credentialed administrators at least through $1990 .{ }^{6}$ The current increase may be at least partially explained by the increasing number of female administrators. More females may be earning administrative credentials as they see increasing possibilities of securing administrative positions.

An analysis of the age of individuals earning teaching credentials reveals an interesting trend: new Califormia teachers are getting older. More than half ( $59 \%$ ) of all individuals who were issued multiple-subject (elementary) credentials in 1985-86 were between 30 and 49 years of age. In 1984-85, this age group represented 56 percent of newly credentialed elementary teachers.

The age increase is even greater among newly credentialed secondary teachers. In 1984-85, 61 percent of those earning single-subject credentials were between the ages of 30 and 49. That number increased by 5 percent, to 66 percent, in 1985-86. The increasing age of those entering teaching may reflect several social trends, including people changing to teaching from other careers and women who have raised their
families and are re-entering the work force.
Half of all California teachers receive their professional preparation at one of the 19 California State University (CSU) campuses. That number rises to 70 percent when one includes teachers who come from out of state and enroll at a CSU campus to register in only one or two courses needed for a California credential.

The CSU system is currently in the process of establishing a statewide data base that will contain information on all of its students-turned-teachers. This information is not now available. However, CSU released preliminary data on individuals who completed CSU credential programs in 1986-87. ${ }^{7}$

During the last academic year, the Califormia State University recommended issuance of 9,184 teaching credentials to the Commission on Teacher Credentialing. ${ }^{8}$ This number represents first-issue single-subject credentials ( $28 \%$ ), mul-tiple-subject credentials (45\%), and advanced credentials, including designated subject, administrative services, and specialist credentials ( $28 \%$ ). Of the total number of individuals recommended by CSU for teaching credentials, the majority ( $66.4 \%$ ) were white. Hispanics accounted for 7.2 percent of CSU's newly minted teachers, Asians for 2.2 percent, and blacks for 1.9 percent. Another 1.6 percent fell into the "other" category; the remaining 20.7 percent were of unknown ethnicity (Figure 4.5 ).

The pattern of minority representation evident in the total recommended credentials held firm within credential categories. Of the 2,587 individuals recommended by CSU for single-subject credentials, 67.1 percent were white, 7.2 percent were Hispanic, 1.5 percent were Asian, 1.7 percent were black, 1.8 percent were "other," and 20.7 percent were "unknown." In the multiple-subjects credential category, of the 4,058 individuals, 70.6 percent were white, 7.9 percent were Hispanic, 2.1 percent were Asian, 1.3 percent were black, 1.6 percent were "other," and 16.5 percent were "unknown." More than 2,500 people $(2,539)$ completed training for an advanced credential at a CSU campus in 1986-87. Of these, 59 percent were white, 6 percent were Hispanic, 3.2 percent were Asian, 3.1 percent were black, 1.3 percent were "other," and 27.5 percent were "unknown."

Further analysis and more complete information will develop a clearer picture of those entering the teaching profession. An examination of the available data, however, leads to the unmistakable conclusion that the state must consider additional strategies if the objective is to encourage more minority group members to become teachers.

FIGURE 4.5 California State University Recommended Credentials by Ethnicity, 1986-87

| Ethnic <br> Group | \% of <br> Total | \% of Single- <br> Subject Credentials | \% of Multiple- <br> Subject Credentials |
| :--- | ---: | :---: | :---: |
| White | 66.4 | 67.1 | 70.6 |
| Hispanic | 7.2 | 7.2 | 7.9 |
| Asian | 2.2 | 1.5 | 2.1 |
| Black | 1.9 | 1.7 | 1.3 |
| Other Groups | 1.6 | 1.8 | 1.6 |
| Unknown | 20.7 | 20.7 | 16.5 |

SOURCE: Division of Analytic Studies, California State University systemwide.

## Teacher Misassignments

The fact that teachers have credentials, even emergency credentials, which authorize them to teach specific grades and subjects does not prevent school districts from assigning teachers to classes outside their designated fields. A recent CTC study concludes that eight percent of all California teachers are "misassigned" to one or more classes daily.? Stated another way, five percent of elementary and secondary classes in California are taught by individuals who are teaching subjects or grades for which they are not appropriately credentialed. In rural areas of the state, seven percent of all elementary and secondary classes are taught by misassigned teachers.

The number of classes taught by inappropriately credentialed teachers is largest in the areas of mathematics ( 26 percent of the classes are taught by misassigned teachers), social science ( $21 \%$ ), science ( $21 \%$ ), and English ( $15 \%$ ).

Teachers in junior high and middle schools are slightly more likely ( $10 \%$ ) to be misassigned than are teachers in senior high schools ( $8 \%$ ). The emergence of the middle school has created additional misassignment problems, as 6th grade teachers with elementary credentials are put into departmentalized settings. The situation at the senior high level, however, is compounded by misassignments within departments. Individuals in social science and science departments, for example, may be teaching within the correct department but outside of their particular major and minor fields.

A new law covering teacher misassignments (Senate Bill 435) became effective January 1, 1988. This statute (1) authorizes CTC to establish "reasonable sanctions" for the misassignment of teachers and (2) establishes a teacher assignment, monitoring, and reporting system. Beginning July

1, 1989, teachers who believe they are misassigned must report their misassignments to their county superintendent's office. That office then has 15 days to determine the validity of the claims. Sanctions will be imposed on the administrators responsible for illegal teacher assignments. Under regulations promulgated by CTC, administrators who assign teachers to grades or subjects which they are not authorized to teach will be subject to penalties ranging from fines to actions against their credentials.

Also under the new law, effective 1988-89, each school district must implement procedures to monitor teacher assignments. Superintendents must provide a district teacher assignment report to their local governing board by December 15 of each year. Districts will also be required to submit a teacher assignment report to the county superintendent. Effective July 1, 1990, county superintendents must submit annual teacher assignment reports to CTC. The Commission on Teacher Credentialing will provide a comprehensive teacher assignment report to the legislature every other year.

## CLASS SIZE

Class size is both a teaching and a learning condition. Teachers need classes that are sufficiently small to enable them to provide a measure of individual attention to each student. Students need the individual attention teachers can offer only in classes of manageable sizes.

According to a 1987 National Governors' Association report, California's "average" pupil-teacher ratio of $23: 1$ is the second highest in the nation. ${ }^{10}$ Yet, even the notion of "average" class size is a misleading one because it does not take into account necessarily small classes, such as those for
special education and advanced placement students. Data recently analyzed by the California State Department of Education reveal that the mean ratio of students to teachers in California's K-12 regular education classrooms in 1985-86 was actually $28: 1 .{ }^{11}$

Another way to think about the number of teachers available per student is to calculate the pupil:professional ratio. In California in 1986-87 that ratio was 19.5:1, meaning that one certificated staff member was employed for every 19 20 students in the state. The term "certificated staff" includes classroom teachers, support personnel such as bilingual and special education instructors who operate "pull-out" programs, pupil personnel staff such as counselors and psychologists, coordinators of categorical programs, and school administrators.

Comparing the average pupil-teacher ratio of $23: 1$ to the pupil:professional ratio of 19.5:1 reveals that California has many certificated employees who are not in the classroom. Removing the 16,725 California school administrators from the certificated personnel category leaves a student "teacher" ratio of $21: 1$, still reflecting a significant number of "teachers" who are not in the classroom. If these nonadministrative certificated employees who are currently out of the classroom assumed classroom duties, average class size in California could be reduced by nine percent. If, in addition, some administrators assumed classroom responsibilities, class sizes could be reduced even further.

The discussion of pupil-professional ratios is informed further by the previously mentioned State Department of Education (SDE) analysis of 1985-86 data. The department developed a composite portrait of an "average" California school. According to the SDE analysis, of the professional educators employed in the "average" California school in 1985-86, 70 percent were regular classroom teachers, 8 percent were special education teachers, 7 percent were pupil support personnel (counselors, psychologists, nurses, and librarians), 7 percent were teacher specialists (subject area specialists or general curriculum specialists), and 7 percent were administrators.

## TEACHER SUPPLY AND DEMAND

Although California hired more new teachers in 1986-87 than it did the previous year, the state continues to experience a shortfall of appropriately qualified individuals. A 1986 PACE study suggests that between 15,000 and 17,000 new teachers will be needed each year between now and 1990 to
meet demand created by growth and attrition. ${ }^{12}$ Using conservative estimates of the state's ability to train new instructors, to attract out-of-state professionals to California, and to induce reserve-pool teachers to re-enter the profession, these researchers forecast a possible shortfall of between 21,300 and 34,800 teachers for the period through 1990.

The problem of teacher demand outstripping supply may intensify before it improves. The new high school graduation requirements, mandated by Senate Bill 813 , became effective in 1986-87. All students must now complete at least three years of English, two years of math, two years of science, three years of social studies, and one year of foreign language or fine arts to be eligible to receive a high school diploma. New, more stringent admission requirements for the Califormia State University system and the University of Califomia also became effective in 1986-87.

Those students who wish to apply to a California State University or University of California campus must complete, in addition to the general high school graduation requirements, an additional year of English and math and at least two years of a foreign language. These increased graduation and admission requirements have resulted in substantial increases in the number of students enrolled in math, science, and foreign language classes (see chapter 6). But, the state does not currently have sufficient numbers of appropriately credentialed teachers to provide instruction to these students.

A recent PACE study suggests that more attractive wages and working conditions in private industry, especially for individuals trained in math and science, may have resulted in teacher shortages in these areas. ${ }^{13}$ According to the PACE study, California schools have employed more than 5,600 teachers with temporary and emergency credentials in math and science in the last five years. More than 1,500 emergency and temporary teachers worked in California math, science, and foreign language classrooms in 1985-86 alone. According to this study, 7,000 new math, science, and foreign language teachers will be needed in California schools by 1990-91.

The teacher shortage problem is not limited to the areas of math, science, and foreign language. Evidence exists that schools may soon be called upon to renew their emphasis on the humanities. A recent national study, results of which were released in September 1987, sharply criticizes American high school students' limited knowledge of history and literature. ${ }^{14}$ According to this study, most students could not place the discovery of America or the start of the Civil War within 50 years of their correct dates, nor could they connect well known
authors with their most famous works.
On this same theme, the president of the University of California recently submitted to the university's Board of Regents a plan to increase the emphasis on the humanities at UC campuses. ${ }^{15}$ While it seems unlikely that the current emphasis on math and science instruction will abate anytime soon, these new concerns about the humanities could manifest themselves as additional English and social science courses requiring more and better prepared teachers.

## Factors Influencing Teacher Supply

Several factors influence the supply of qualified teachers in California, including the California Basic Educational Skills Test (CBEST), financial aid available to prospective teachers, the existence of alternate routes to certification, and teachers' professional working conditions. Some of these factors represent policies and conditions over which the state can exert substantial influence.

California Basic Educational Skills Test (CBEST). California administered the California Basic Educational Skills Test (CBEST) for the fifth year in 1986-87. This exam, a test of basic skills in reading, writing, and mathematics,
focuses on the application of principles and problem solving. Passing standards were established by the superintendent of public instruction in 1983 and have remain unchanged since that time.

Under current Commission on Teacher Credentialing (CTC) regulations, CBEST is required for first-issue teaching and administrative credentials, for admission to some teacher preparation programs, and for individuals returning to teaching after an absence from the classroom of 39 months or longer. Those who fail to pass CBEST on their first attempt may take the test as often as they like, but they are not required to retake any section they pass. Typically, passing rates decline for individuals who retake the test multiple times.

More than 45,000 individuals $(45,326)$ took CBEST in 1986-87 (Figure 4.6), a 12 percent increase over 1985-86. ${ }^{16}$ The fifth-year passing rate ( $75 \%$ ) was identical to the fourthyear rate. However, the number of people taking the test in 1986-87 increased by 10 percent over 1985-86. Effectively, then, the trend of continued improvement in CBEST passing rates was maintained. In the previous two years, the increase in the number of test takers was three percent and four percent, respectively. Importantly, more nonwhites took the test in 1986-87 than had been the case the previous year.

FIGURE 4.6 CBEST Attempts by Ethnicity, 1983-84 through 1986-87
$\left.\begin{array}{lcccccc}\hline & \begin{array}{c}1983-84 \\ \text { Number }\end{array} & \begin{array}{c}1984-85 \\ \text { Number }\end{array} & \begin{array}{c}1985-86 \\ \text { Number } \\ \text { Tested }\end{array} & \begin{array}{c}1986-87 \\ \text { Number } \\ \text { Tested }\end{array} & \begin{array}{c}\text { \% Change } \\ \text { Previous }\end{array} & \begin{array}{c}\text { \%Change } \\ \text { Tested }\end{array} \\ \text { Ethnic Group } & & & & & \\ \text { Tested }\end{array}\right)$

SOURCE: Richard W. Watkins, "Fifth Year Passing Rates on the California Basic Educational Skills Test (CBEST) and Passing Rates by Institution Attended" (Sacramento, CA: California Commission on Teacher Credentialing, September 1987).

Although CBEST was not designed as an admission test, an increasing number of teacher preparation programs are using CBEST results to screen potential teacher-training enrollees. The number of individuals taking CBEST prior to application to a credential program rose 19 percent last year. Slightly more than three-quarters of this group ( $76 \%$ ) passed the test on the first attempt. Three-quarters (75\%) of those who reported they are considering applying to a teacher preparation program passed CBEST on their first try.

The number of people who took CBEST subsequent to application but prior to admission to a teacher preparation program increased markedly in 1986-87, up 17 percent over 1985-86. Nearly three-quarters of this group ( $72 \%$ ) passed the test on their first attempt. The number of individuals whotook CBEST once they had started student teaching continued to decline, down to 1.6 percent in 1986-87. The passing rate for this group remained 58 percent.

Among those pursuing teaching credentials, the CBEST passing rate was highest ( $77 \%$ ) for those seeking emergency credentials. Among those who already held California credentials, the passing rate was highest ( $78 \%$ ) for those seeking to have their names included on a substitute teaching list.

Approximately seven percent of individuals taking CBEST for nonemergency credentials planned to apply for a teaching credential with a bilingual emphasis. Passing rates for this group of test takers continued to be lower than for test takers seeking a credential without a bilingual emphasis. The passing rate for people seeking a multiple-subjects (elementary) credential was 71 percent; for a multiple-subjects credential with bilingual emphasis, the passing rate was 52 percent, up 6 percent from last year. Among those working toward a single-subject (secondary) credential, the CBEST passing rate was 77 percent. Slightly more than half ( $51 \%$ ) of individuals seeking a single-subject credential with a bilingual emphasis passed the test in 1986-87, down 2 percent from 1985-86 passing rates.

The passing rates for first-time test takers on each section of the test remained stable. In 1986-87, 85 percent of firsttime test takers passed the reading portion of CBEST, compared to 86 percent in 1985-86. Better than 80 percent ( $81 \%$ ) passed the math section on their first attempt in 1986-87, compared to 82 percent the previous year. Passing rates on the writing section showed slight improvement as 79 percent passed on their first attempt in 1986-87 compared to 78 percent in 1985-86.

Mexican-Americans, other Hispanics, and whites made the greatest gains in first-time CBEST passing rates in 1986-
87. Asians and blacks lost some ground. In both 1985-86 and 1986-87, Asians accounted for 3 percent of first-time CBEST test takers. Passing rates for this group were 62 percent in 1985-86 and 61 percent in 1986-87. Five percent of test takers were black, both in 1985-86 and in 1986-87. In 1985-86, 36 percent of blacks passed CBEST on the first try; that number dropped to 34 percent in 1986-87.

Mexican-Americans and other Hispanics continued to make gains on CBEST. In both years, Mexican-Americans accounted for 4 percent of CBEST first timers. In 1985-86, exactly half of the Mexican-Americans taking the test passed it the first time. That number jumped to 59 percent in 198687. Other Hispanics, who composed 2 percent of first-time test takers in both 1985-86 and 1986-87, had a 48 percent passing rate two years ago and a 3 percent increase, to 51 percent, in 1986-87. Whites account for the largest share of CBEST takers, composing 83 percent in 1985-86 and 82 percent in 1986-87. In 1985-86, 49 percent of whites taking CBEST for the first time passed. The following year that figure rose 5 percent, to 54 percent (Figure 4.7).

## Alternate Routes to Certification

The Teacher Trainee Program was established as part of SB 813, California's 1983 omnibus school reform legislation. The program was envisioned as a way to encourage secondcareer professionals into teaching by allowing them to bypass traditional teacher preparation programs. Originally limited to prospective teachers in grades $9-12$, legislation signed into law in 1987 now allows school districts to employ teacher trainees in grades K-8.

A school district desiring to hire a teacher trainee must certify to the Commission on Teacher Credentialing that fully credentialed teachers are not available in the required grades or subjects. The district must also be participating in the state's Mentor Teacher Program. Prospective teacher trainees are required to possess a bachelor's degree and must pass both the CBEST and the National Teachers' Exam (NTE) in the appropriate subject area or discipline. To qualify for a teaching credential, the trainee must teach successfully for two years under the supervision of a mentor teacher and must complete a professional preparation program developed in consultation with the employing school district and a cooperating college or university.

In 1985-86, 197 individuals entered the Teacher Trainee Program. An additional 150 trainees were added to the program in 1986-87. The vast majority of the teacher trainees

## FIGURE 4.7 CBEST Passing Rates by Ethnicity

Percent
Passing


Ethnicity

SOURCE: Richard W. Watkins, "Fifth Year Passing Rates on the California Basic Educational Skills Test (CBEST) and Passing Rates by Institution Attended" (Sacramento, CA: California Commission on Teacher Credentialing, September 1987).
(96\%) are in the Los Angeles Unified School District. The remaining four percent are scattered among California's rural school districts, primarily in the Sierra foothills and in farming communities in the San Joaquin and Sacramento valleys.

The Commission on Teacher Credentialing recently completed a study of the Teacher Trainee Program. ${ }^{17}$ That study followed teacher trainees for the program's first two years of operation, from 1984 to 1986. The commission found that 80 percent of the teacher trainees who began in the program in 1984 were still in the program two years later.

According to the CTC study, the average teacher trainee was 31 years old. Three-fifths of the trainees were male, about the same proportion of men as is represented in the general high school teaching force. (The study covered only the program's first two years, when participation was limited to high school teachers.)

More than three-quarters $(78 \%)$ of the trainees were white. The percentage of blacks entering the program decreased from 15 percent in 1984-85 to five percent in 1985-86. The percentage of Hispanics rose during this same period from three percent to nine percent of the total. One-fifth of the entering teacher trainees ( $20 \%$ ) possessed master's degrees or doctorates. One-third had earned their bachelor's degrees outside California.

Of teacher trainees who had attended college in California, nearly one-third ( $30 \%$ ) had earned their B.A. at the University of California, another one-third held degrees from the California State University, and the remaining one-third had completed their undergraduate studies at private colleges and universities.

Although the Teacher Trainee Program was established to entice second-career adults into teaching, results of CTC's study reveal that 40 percent of teacher trainees were students who had never before worked full time. Among the teacher trainees who had previously held full-time jobs, more than 40 percent had been teachers. Some had been employed outside Califormia and thus did not possess a California teaching credential. Others had taught in California private schools or children's centers which did not require a teaching credential. Still others were teaching under emergency credentials. Of those teacher trainees who were making career changes, most had been previously employed in sales, marketing, or service occupations.

The reason most often stated by teacher trainees for wanting to become teachers was the availabilty of jobs. When teacher trainees were asked why they did not pursue credentials through conventional teacher preparation routes, half
said that they wanted to earn a credential and a salary at the same time. One-third of the trainees who entered the program in 1985-86 cited "unsatisfactory perceptions of college teacher preparation programs."

Most teacher trainees carried full teaching loads of five classes per day. In 1985-86, the largest number of teacher trainees was hired in biological sciences, followed by English and mathematics. In the Los Angeles Unified School District, 28 percent of new biological science teachers hired in 198586 were teacher trainees. Nearly one-quarter ( $23 \%$ ) of all new teachers hired in Los Angeles in 1985-86 were teacher trainees.

A controversial component of the CTC study found that teacher trainees were performing as well at the end of their first two years as were probationary and emergency teachers in the same school district. ${ }^{18}$ However, the CTC study reported that trainees who experienced the most success in the classroom were those who completed university courses in education while instructing in schools under the tutelage of experienced teachers. The commission concluded: "This finding suggests that the internship model, which relies on the expertise of practitioners and professors, is a promising approach to teacher preparation."

## Financial Incentives to a Teaching Career

Senate Bill 813 also established APLE-the Assumption Program of Loans for Educators. The program's original mission was to assist school districts to recruit high-quality teachers in fields of shortage, specifically math, science, and bilingual education. APLE was established by the legislature to assist qualified, already-employed teachers in repaying their student loan debts. Under the original provisions of the program, 500 new participants were to be added to APLE each year. APLE has been substantially reorganized since its beginning in 1983. Applications ceased to be accepted after 1984-85, and the program was revamped by subsequent legislation.

The focus of APLE has been shifted to directing promising college students into public school teaching. The new program requires that all APLE applicants be prospective teachers currently enrolled in colleges or universities with CTC-approved teacher credential programs. APLE loans will no longer be offered to already-employed educators. APLE will guarantee each qualified participant a maximum of $\$ 8,000$ in loan assumption benefits, paid by the state in installments once the APLE participant has secured a teaching
position. APLE participants must either (1) obtain a teaching credential in math, science, or bilingual education and commit themselves to teach that subject for three consecutive years, or (2) obtain a teaching credential in any subject area or discipline and agree to teach for three years in a public school serving a high proportion of low-income students. The first 500 participants under the newly revised APLE will be selected in 1988.

## Creating a Professional Work Environment

Teaching once represented the only professional opportunity available to many talented women and minorities. Now the doors to other professions have swung wider to these groups. Teaching must compete for the "best and the brightest" with business, law, medicine, and other professions.

Statewide concern about teacher demand surpassing supply is an issue of both quantity and quality. What steps should the state take to ensure that every classroom is staffed by a competent teacher? What incentives will persuade academically able teachers to remain in the profession? Questions such as these are of immediate policy significance.

The Metropolitan Life Insurance Company conducted a survey of California teachers in $1985 .{ }^{19}$ The results, analyzed by PACE, revealed that more than half of all current California teachers have seriously considered leaving the profession. One-quarter of California teachers report that they plan to leave teaching within the next five years. When teachers were asked to name the two most unfavorable professional characteristics of teaching, they cited lack of professional prestige and limited control over one's own work.

Much of the current discussion of attracting and retaining academically able teachers centers on the notion of making teaching a full profession. Two hallmarks of a profession are (1) the ability to use one's judgment to make decisions and (2) the opportunity to develop professional relationships with colleagues. On both of these dimensions, according to those polled, public school teaching falls far short.

For example, according to a PACE survey conducted for the California Commission on the Teaching Profession, ${ }^{20}$ nearly all teachers ( $96 \%$ ) state that they want to be involved in determining what is taught at their schools; fewer than half ( $41 \%$ ) claim they are involved currently in this facet of their work lives.

Nearly all teachers ( $98 \%$ ) believe the adminstration should consider their preferences in arranging teaching assignments; 42 percent report that their preferences are consid-
ered. More than three-quarters of California teachers want to participate in selecting the new teachers who are added to their faculties; just 15 percent say they are currently consulted. On the issue of working with colleagues, teachers report the opportunities are too few and far between.

California has taken initial steps to create a professional work environment for teachers. These changes are reflected in the Mentor Teacher Program and in the focus and range of professional development opportunities increasingly available to teachers.

## MENTOR TEACHER PROGRAM

According to data from the State Department of Education, 7,596 teachers were designated as "mentors" in 1986-87, a 9.3 percent increase over 1985-86. Although current law allows five percent of the state's teachers to be mentors, that provision has never previously been fully funded. ${ }^{21}$ The state appropriated $\$ 45.7$ million in 1986-87 for the Mentor Teacher Program, funds sufficient to support 3.75 percent of the state's teachers as mentors.

Nearly 90 percent of all school districts (920) participated in the program last year. According to California Basic Educational Data System data, mentors were evenly divided among elementary and secondary teachers, with 45 percent of the mentors being teachers in grades K-8 and 45 percent teachers in grades 9-12. The remaining 10 percent of the mentor teacher slots were awarded to vocational education teachers.

Since the inception of the Mentor Teacher Program in 1983, the focus of mentors' work in most districts has been on curriculum development. A 1986 study of the Mentor Teacher Program by the California State Department of Education revealed that most districts tended to treat the program as "extra work for extra pay," with mentors typically completing individual projects under general supervision and submitting logs detailing their work and the hours spent on it. ${ }^{22}$

According to recent information obtained by the State Department of Education, the mentor teacher program is undergoing something of a metamorphosis. Districts report that the program is most successful when mentors are involved in determining program direction and when there are clear, agreed-upon expectations for mentors.

A shift in program focus also seems to be underway. The State Department of Education reports that informal interviews conducted in 1987 with school district-level staff members around the state indicate that districts are moving
away from the individual project orientation of the program.
Faced with shrinking staff development budgets, districts are turning to mentor teachers to provide professional support to new teachers. Districts report that they are investing time and money in providing training for mentors in observation, feedback, and coaching techniques. This finding is corroborated by a PACE/FarWest Laboratory staff development study. ${ }^{23}$

A two-year bill currently before the legislature would statutorily refocus mentors' work away from curriculum development to responsibility for working with, or "mentoring to," new teachers.

## STAFF DEVELOPMENT

The California Staff Development Policy Study, a joint project of PACE and Far West Laboratory for Educational Research and Development, was initiated by the legislature and governor in response to the steady escalation in the number and funding levels of staff development programs in California. The study, which focused on staff development options in 32 California school districts, was designed to aid policy makers by providing answers to four questions: (1) What is the total taxpayer investment in staff development and what forms does this investment take? (2) By what activities or approaches does staff development achieve its goals? (3) How do educators judge the quality and impact of staff development? (4) What policy and program options might the state pursue to enhance classroom benefits associated with staff development?

The PACE/Far West study found that California taxpayers spent $\$ 357$ million, or 1.8 percent of the total education budget, in 1985-86 on direct costs for staff development programs for teachers and administrators. This figure translates to an average local school district expenditure of $\$ 912$ per teacher. Taxpayer dollars spent on direct staff development activities paid primarily for the salaries of inservice specialists and for substitute teachers.

Taxpayers' largest investment in staff development$\$ 600$ million per year-was in the form of anticipated costs, i.e., future salary obligations to teachers who accrue credits as a result of advanced university coursework or district-sponsored activities and thereby advance on the salary schedule. While the direct state appropriation for staff development programs is $\$ 357$ million, when future salary increases are taken into account, taxpayer investment in staff development is nearly $\$ 1$ billion per year, or four percent of the total
education budget.
The PACE/Far West study revealed the absence of a comprehensive or consistent state-level policy orientation to guide staff development. This lack of direction impedes a productive linkage between the purposes of staff development and the institution(s) best equipped to pursue those purposes.

For example, the growth of staff development programs has spawned a proliferation of new service providers, usually regional service centers housed in county offices of education, but has left the California State University system relatively underused for teacher and administrator inservice education. At the same time, districts' abilities to organize and deliver staff development has grown steadily. District personnel reveal increasing sophistication about the design of staff development offerings.

The study also found that state staff development funds are spent primarily in ways that reinforce existing patterns of teaching and conventional structures of schools. In most districts, staff development is organized as a menu of individual offerings. Staff development programs are rarely structured as collegial undertakings organized and planned by teachers. Teachers are infrequently provided an opportunity to share with colleagues what they have learned as a result of participation in staff development activities.

Moreover, staff development activities go largely unevaluated. Individual inservice courses are reviewed, but a district's total staff development program is rarely assessed for its relationship to overall school or district goals. The impact of staff development is rarely tested at the classroom level. Even the impact of costly and potentially promising state-funded programs, such as the Mèntor Teacher Program, is largely unknown.

A significant finding of the PACE/Far West study is that teachers and administrators are firmly committed to improving their knowledge and practice and view staff development as a means to accomplish this. For every dollar districts and schools spend on staff development, individual teachers contribute 60 cents in volunteer time. Teachers report that "access to new ideas" is their prime motivation for participating in staff development activities.

Previous research has shown that staff development can favorably influence teacher practice and the overall quality of school programs. However, the PACE/Far West study reports, California's current "menu approach" to staff development is unlikely to yield substantial changes in teachers or schools. The researchers found that few staff development activities are linked to well developed support systems, the
intellectual content of inservice offerings is often thin, and follow-up is insufficient.

Additionally, the quality of staff development is constrained by the sheer number of demands on teachers' time. "If the reports issued by the Commons Commission and the Carnegie Forum contain recommendations for schools and teaching that are worth pursuing," says the PACE/Far West report, "the current organization of staff development will do little to advance California schools toward those ends."
${ }^{1}$ National Education Association, Estimates of School Expenditures, 1986-87.
${ }^{2}$ Walter W. McMahon and Carroll Melton, "Measuring Cost of Living Variation," Industrial Relations, 17(3): 333.
${ }^{3}$ Anne Bridgeman, The Executive Educator, September 1987.
${ }^{4}$ Credential Profile 1985-86 ( Sacramento, CA: Commission on Teacher Credentialing, December 1986).
${ }^{5}$ Those admitted under the rules of the 1970 authorizing act, the Ryan Act.
${ }^{6}$ William Gerritz, Julia Koppich, and James W. Guthrie, Preparing California School Leaders: An Analysis of Supply, Demand and Training (Berkeley, CA: University of California, Policy Analysis for California Education, PACE, November 1984).
${ }^{7}$ Data obtained in October 21, 1987 telephone conversation with Ron Basich, Associate Director, Division of Analytic Studies, CSU Systemwide.
${ }^{8}$ Note: This number is stated in terms of credentials rather than individuals to avoid "double counting" those individuals (fewer than 10 percent of the total) who received more than one credential in a single year.
${ }^{9}$ Teacher Assignment Practices in California School Districts: A Report to the California State Legislature (Sacramento, CA: Commission on Teacher Credentialing, February 1987).
${ }^{10}$ Results in Education 1987: The Governors' 1991 Report on Education (Washington, DC: National Governors' Association, 1987).
${ }^{11}$ "The Average Costs of a California School 1985-86," Califormia State Department of Education.
${ }^{12}$ Helen H. Cagampang, Walter I. Garms, Todd J. Greenspan, and James W. Guthrie, Teacher Supply and Demand in California: Is the ReservePool a Realisitic Source of Supply? (Berkeley, CA: University of California, Policy Analysis for

California Education, PACE, August 1986).
${ }^{13}$ Helen H. Cagampang and James W. Guthrie, Status of Math, Science, and Foreign Language Instruction in California, (Berkeley, CA: Univeristy of California, Policy Analysis for CaliforniaEducation, PACE, February 1988). Also Henry M. Levin, "Solving the Shortage of Mathematics and Science Teachers" (Stanford, CA: Institute for Research on Educational Finance and Governance, January 1985).
${ }^{14}$ Chester E. Finn and Diane Ravitch, What Do Our 17-YearOlds Know? (Washington, DC: National Assessment for Educational Progress, September 1987).
${ }^{15}$ Michael Harris, "UC's New Thrust for the Humanities," San Francisco Chronicle, September 16, 1987.
${ }^{16}$ Richard W. Watkins, "Fifth Year Passing Rates on the California Basic Educational Skills Test (CBEST) and Passing Rates by Institution Attended" (Sacramento, CA: Commission on Teacher Credentialing, September 1987).
${ }^{17}$ The Effectiveness of the Teacher Trainee Program: An Alternative Route into Teaching in California, Report to the California Legislature (Sacramento, CA: Commission on Teacher Credentialing, 1987).
${ }^{18}$ This finding was criticized at a CTC meeting when it was revealed that some of the researchers were from the school district in which the trainees were employed and thus were thought to have a vested interest in the success of the program. ${ }^{19}$ The Metropolitan Life Survey of the California Teacher 1985 (New York: Metropolitan Life Insurance Company and Policy Analysis for California Education, PACE, 1985).
${ }^{20}$ Julia Koppich, William Gerritz, and James W. Guthrie, $A$ Viewfrom the Classroom: California Teachers' Opinions on Working Conditions and School Reform Proposals (Berkeley, CA: University of California, Policy Analysis for California Education, PACE, March 1986).
${ }^{21}$ The governor's budget for fiscal year 1988-89 proposes full funding for five percent of the state's teachersto be "mentors." ${ }^{22}$ Laura A. Wagner, "A State Perspective on Teacher Leadership Roles : The Potential of the California Mentor Teacher Program," unpublished report prepared for the California State Department of Education.
${ }^{23}$ Judith Warren Little, William Gerritz, David Stern, James W. Guthrie, Michael W. Kirst, and David Marsh, Staff Development in California: Public and Personal Investments and Program Patterns (Berkeley, CA: University of California, Policy Analysis for California Education, PACE, and Far West Laboratory for Educational Research and Development, December 1987).

## chapter 5

# Organization and Control 

The organization and control of California's schools are exceedingly complex. Recent opinion polls demonstrate widespread misconceptions about who controls California education. The public believes there is much more local discretion than actually exists and seriously underestimates the state role. It believes that local sources of funding are larger than state sources, when actually the situation is reversed. In many respects, California schools constitute a state system that is operated locally. For example, the state controls approximately 94 percent of school funding and uses an eight-and-a-half volume education code for regulation (Figure 5.1). In other respects, local authorities have a great deal of discretion in areas such as which teachers to hire and which school sites pupils should attend.

## DIVERSITY

California has an unusually complex formal arrangement of school district structure. There are 1,026 school districts with varied configurations such as $\mathrm{K}-8, \mathrm{~K}-6,6-12$, and 9-12. Citizens often live in two school districts-one for elementary and another for high school. Many school districts are not contiguous with city, town, or any other identifiable border. The city of San Jose, for example, has 21 school districts within its boundary.

The movement toward consolidation of school districts peaked in the 1970s and has been stalled ever since (Figure 5.2). Few consolidations have been proposed by local citizens to the State Board of Education for its approval. Indeed, just as many proposals for secession from larger districts to create an even greater number of small districts have been on the state board's agenda in the last decade. Currently, there are 119 local school districts with enrollments less than 100 and 385 districts with enrollments under 500 .

## LOCAL CONTROL

The historic hallmark of American education governance has been reliance on a local school board. No other western

## HIGHLIGHTS

- Local school boards are experiencing a loss of policy making discretion and increasing criticism of their performance.
- Local school boards believe they have been omitted from state reform decisions and express concern about the increasing role of the state in education policy making.
- Local planning is hampered by a year-to-year funding cycle that includes unexpected changes in final funding levels occuring as late as September.
- The public is remarkably confused about the costor manner of funding of education in California. A1though the state now controls 94 percent of public school funding, a majority of voters believes that local property taxes provide most school revenues. Voters also remain unconvinced that schools have compelling reasons for seeking additional funding.
- The courts continue to be important players in the education arena. In 1988, there were more than 100 active suits against the State Department of Education and State Board of Education involving almost all areas of local school operations.
nation controls its schools through such lay boards, but these boards have been confronted with a gradual loss of discretion and increasing criticism of their performance. In Conditions of Education in California, 1986-87, PACE analyzed the history and causes for the gradual increase in state control over local authorities.

Events in 1987 display a slight movement toward more local control through the pruning of selective state restrictions on categorical grants and the governor's veto of a specific film mandated for use in local AIDS education. But the 1986 legislature restricted the right of schools to designate smoking areas and specified standards for student participation in extracurricular activities. It is unclear what types of decisions state officials trust local authorities to make.

A major problem of current governance arrangements is

FIGURE 5.1 Governance Structures for Public Education in California

Elementary and Secondary Schools


SOURCE: Understanding Community College Governance, Board of Governors, April 1986.
local uncertainty about levels of funding. Local planning is hampered by a year-to-year funding system that involves unexpected changes in final funding levels that occur as late as September, as happened in 1987. In that year, the legislature and governor could not agree on funding, so initial local funding levels were not set until early July after the governor's line-item veto. Final levels were established only in September.

A related, fundamental issue in the control of California schools is the inability of most localities to raise funds independent of state fiscal allocations. As a result of Proposition 13 (1978), local school districts cannot increase ad valorem property taxes. Consequently, it is difficult for Californians to discern "who is in charge" of their schools and to know who is politically accountable.

## DISTRICT CHARACTERISTICS

The majority of California public school districts fall into one of three classifications: elementary ( $\mathrm{K}-8$ ), high school (9-12), or unified (K-12). Currently, there are 7,268 schools organized into 1,026 separate districts in the state. Six hundred forty-three of these districts are elementary, 112 are high school, and 271 are unified. District enrollments range from 6 to 589,099 . Figure 5.3 displays the number of districts by student enrollment.

FIGURE 5.2 Number of California School Districts for Selected Years, 1935-1985


SOURCE: California Basic Educational Data System (CBEDS). "Selected Education Statistics, 1984-85" (Sacramento, CA: Califormia State Department of Education, 1985).

FIGURE 5.3 Number of School Districts by Enrollment, Selected Years

| Enrollment | 1986-87 |  | 1983-84 |  | 1981-82 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Percent | Number | Percent | Number | Percent |
| 50,000 and over | 6 | 0.6 | 6 | 0.6 | 4 | 0.4 |
| 30,000-49,999 | 7 | 0.7 | 6 | 0.6 | 8 | 0.8 |
| 10,000-29,999 | 89 | 8.7 | 84 | 8.2 | 82 | 7.9 |
| 5,000-9,999 | 107 | 10.4 | 103 | 10.3 | 108 | 10.4 |
| 1,000-4,999 | 308 | 30.0 | 300 | 29.2 | 285 | 27.4 |
| 500-999 | 124 | 12.1 | 126 | 12.2 | 144 | 13.8 |
| 100-499 | 266 | 25.9 | 279 | 27.1 | 283 | 27.1 |
| Less than 100 | 119 | 11.6 | 125 | 12.2 | 127 | 12.2 |
| TOTAL | 1,026 | 100.0 | 1,029 | 100.0 | 1,041 | 100.0 |

SOURCE: "Selected Education Statistics, 1984-85" (Sacramento, CA: California State Department of Education, 1985), and California Basic Educational Data System (CBEDS).

Encouraged by state financial incentives, many school districts unified or consolidated into larger districts thereby reducing the total number of districts from 3,000 in 1935 to 1,026 today. The legislature still provides unification bonuses, but few consolidations have taken place since 1970.

California's 25 largest school districts ( 2.4 percent of all districts) serve approximately 35 percent of the state's public school students. Almost half of the 1,026 districts have enrollments lower than 1,000 , and 119 enroll 100 or fewer students. The largest district in the state is Los Angeles Unified, which serves almost 590,000 students ( 13.5 percent of California's public school students) in over 694 schools. California counties vary greatly in the number of students served.

## SCHOOL CHARACTERISTICS

There were 7,268 public schools in California in 198687 , representing a small increase since 1985-86. The most common types of school organization are (1) elementary ( 4,560 schools, usually organized as either K-6, K-7, or K-8), (2) intermediate and junior high ( 951 schools, usually organized 4-6, 4-8, 5-8, 6-8, or 7-8, 7-9), (3) and high schools (820 schools, usually organized as $9-12$ or $10-12$ ). The most common configurations of schools within unified school
districts and between elementary and high school districts include (1) K-8, 9-12; (2) K-6, 7-8, 9-12; (3) K-6, 7-9, 10-12; and (4) $\mathrm{K}-5,6-8, ~ 9-12$.

There are more than a thousand schools of other types in Califormia. These include continuation high schools ( 420 schools), county superintendent-operated schools (frequently for special education), and other types of schools, such as alternative schools, opportunity schools, and schools for pregnant minors ( 517 schools).

Median enrollment for elementary schools was approximately 450 pupils; for intermediate and junior high schools, approximately 650; and for high schools, approximately 1,500 . But just as for districts, these numbers mask great variances, ranging from one-room elementary schools in remote areas, frequently enrolling 10 or fewer students, to massive urban high schools with enrollments exceeding 4,000 . Continuation high schools ${ }^{1}$, schools for pregnant minors, and other special schoolstypically enroll substantially fewer pupils (Figure 5.4).

In accord with their specialized function-to prevent dropouts and provide a more flexible program-continuation secondary schools generally enroll smaller numbers of students, with 55 percent of continuation schools having an enrollment of fewer than 100 students. Continuation schools are alternatives for pupils having difficulty adjusting to the

Figure 5.4 Number of California Schools by Type and Size, 1985-86

|  | Elementary | Intermediate/ Junior High | High* | Continuation ${ }^{\dagger}$ | Other ${ }^{\text {T }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| >2,200 | 6 | 11 | 154 | 0 | 33 |
| 1,800-2,200 | 7 | 18 | 137 | 0 | 9 |
| 1,500-1,799 | 11 | 22 | 116 | 0 | 2 |
| 1,200-1,499 | 47 | 51 | 112 | 0 | 5 |
| 1,000-1,199 | 97 | 87 | 36 | 0 | 3 |
| 800-999 | 290 | 166 | 47 | 0 | 10 |
| 600-799 | 966 | 237 | 43 | 4 | 4 |
| 500-599 | 796 | 126 | 18 | 6 | 6 |
| 400-499 | 924 | 84 | 17 | 12 | 16 |
| 300-399 | 640 | 61 | 30 | 19 | 17 |
| 200-299 | 309 | 40 | 28 | 49 | 28 |
| 100-199 | 221 | 37 | 43 | 96 | 82 |
| <100 | 246 | 11 | 38 | 233 | 299 |
| Total | 4,560 | 951 | 820 | 420 | 517 |
| *One case missing from computer run. <br> ${ }^{\dagger}$ Three cases missing from computer run. <br> ${ }^{\text {Hone }}$ Onse missing from computer run. |  |  |  |  |  |

SOURCE: California Basic Education Data System (CBEDS).
normal high school organizational structure. Although many of these students are at risk of dropping out, continuation schools also provide an alternative for students not having academic difficulty but requiring a flexible time schedule for their studies (e.g., those whose economic situation requires them to work during the academic day, or those who spend a large part of their day in rigorous training for athletic competition). Most new continuation schools (there were five in 1986-87) reflect an enrollment of 90 to 120 students. With more than 80 percent of continuation schools having the same graduation requirements as traditional high schools in their districts, continuation schools provide an alternative means of high school completion which features part-time attendance, smaller class sizes, and individualized instruction .

## Private School Characteristics

Although there continues to be strong support for a public education system, an increasing number of parents of preschool children indicate a preference for private school educa-
tion. A recent California Teachers Association (CTA) survey indicates that there was a 10 percent increase in the number of parents with preschool children who express an intention to send their children to private schools.

There are approximately 531,000 students enrolled in 5,684 private schools. Thirty-five percent of these schools enroll four or fewer students and are typically "home schools." In 1986-87, 41.8 percent of California's private schools enrolled 10 or fewer students, 30.2 percent enrolled between 11 and 100 pupils, 25.2 percent enrolled between 101 and 500 students, and 2.8 percent enrolled 500 or more students (Figure 5.5). Most private schools are elementary or K-8 ( 4,200 , or $74 \%$ ); $888(16 \%)$ are K-12, $345(6 \%)$ are $9-12$, and $251(4$ $\%)$ are ungraded.

In 1986-87, religious and church-affiliated schools in California accounted for 398,832 students or 75 percent of total private school enrollment. The majority of churchaffiliated schools are Roman Catholic ( $61.6 \%$ ), followed by Baptist (8\%), Lutheran (6.1\%), Seventh-Day Adventist (4\%), and Assembly of God (3.6\%) (Figure 5.6).

FIGURE 5.5 Number of Private Schools by Enrollment, 1986-87

| Enrollment | \#of Schools | \% Total \# Private Schools | \%Private School Students |
| :--- | :---: | :---: | :---: |
| $1-4$ | 2,009 | 35.3 | 0.7 |
| $5-10$ | 368 | 6.5 | 0.5 |
| $11-30$ | 860 | 15.1 | 3.1 |
| $31-50$ | 350 | 6.2 | 2.6 |
| $51-100$ | 508 | 8.9 | 7.0 |
| $101-250$ | 765 | 13.5 | 24.2 |
| 251-500 | 667 | 11.7 | 40.6 |
| $501-1000$ | 140 | 2.5 | 16.9 |
| $1000^{+}$ | 17 | 0.3 | 4.4 |
| Total | 5,684 | 100.0 | 100.0 |

SOURCE: California Basic Educational Data System (CBEDS), 1986-87.

## FIGURE 5.6 Percentage of Private School Enrollment in

 Church-Affiliated Schools| Affiliation | Percent of Total Private School Enrollment |
| :--- | :---: |
|  |  |
| Roman Catholic | $61.6 \%$ |
| Baptist | 8.0 |
| Lutheran | 6.1 |
| 7th Day Adventist | 4.0 |
| Assembly of God | 3.6 |
| Interdenominational | 2.9 |
| Episcopal | 1.8 |
| Methodist | 0.8 |
| Hebrew | 0.7 |
| Disciples of Christ | 0.6 |
| Pentecostal | 0.5 |
| Presbyterian | 0.5 |
| Other | 9.1 |
| Total Number of Students | 398,832 |

## CLASSROOM ORGANIZATION

There were 162,900 classes in California schools in 1985-86. The bulk $(151,700)$ were regular classes ${ }^{2}$ and were essentially of two types:

1. Self-Contained. These classes exist primarily in elementary schools in which an instructor teaches a full array of subjects-mathematics, science, reading, writing, social studies, and art-to the same students for a full school day. Some of these classes combine more than one grade (grades are frequently combined in cases in which there are insufficient students in a single grade to compose a full class of students).
2. Departmentalized Classes. These classes, typically found in middle, junior, and senior high schools, are characterized by subject matter instruction; that is, rather than one teacher instructing a class of students in all subjects, the instructor teaches the same subject matter to more than one set of students during the school day. Subject-matter classes also occur in elementary schools when a specialist, in art or music for example, may be employed to teach a single subject across grade levels or in more than one school. Subject-matter classes are normally organized into departments. The most frequently offered classes, in descending order by department, occur in:

| Department | Number of Classes |
| :--- | :---: |
| English | 91,222 |
| Mathematics | 58,240 |
| Social Science | 56,710 |
| Physical Education | 49,588 |
| Special Education | 43,186 |
| Science | 41,664 |

There are literally hundreds of different classes ranging from small, scattered-enrollment classes in subjects such as archeology, third-year Portuguese, hardware/building, or cinematography, to classes with massive statewide student enrollment in such basic, required courses as comprehensive English, United States history, or algebra.

## SCHOOL BOARDS

The majority of school board members are white ( $88.6 \%$ ) and have college degrees ( 76 percent, with 30 percent completing post-graduate work). The proportion of female board members has increased to approximately 50 percent. Despite the continuing increase in California's Hispanic population, there has not been an appreciable increase in ethnic representation on school boards.

As revealed in a 1982 California School Board Association (CSBA) survey, board members often have a history of involvement in education issues. Forty percent report having been members in Parent Teacher Associations prior to their election. Almost 30 percent indicated that they had performed volunteer work in a classroom. Approximately 28 percent served on school advisory committees, and 25 percent worked on district advisory committeees.

About one-fourth of school board members have had direct experience as classroom teachers, an additional 4.6 percent are employed as higher education teachers, and 1.5 percent are employed as school administrators. More than four percent of school board members are married to teachers.

The most frequently cited occupations among school board members are homemaker ( $18 \%$ ) and professional ( $17.1 \%$ ). Over eight percent of board members are employed in office work, and 7.8 percent are retired. Approximately 30 percent of school board members are over age 50 with an equal percentage under age 40.

School board members report being interested in running for office because they have children in school, they desire to improve school quality, they are interested in public service, or they were encouraged to become candidates. Almost twothirds of board members have served fewer than five years;
17.2 percent say they would not run for re-election.

## School Boards in Operation

Local school boards traditionally provided lay governance of public education, although they have become neglected entities in recent education reform movements. In omitting local boards from the reform agenda, state legislators and education reformers have reflected a lack of confidence in the education leadership of local board members.

The Institute for Educational Leadership's (IEL) recent national survey of local school boards indicated that the public supports the notion of local governance through these boards but demonstrates a lack of interest and understanding about their structure, role, and functions. ${ }^{3}$

Reforms initiated by Senate Bill 813 are still being implemented in school districts with very little in the way of new state reform emerging since 1983. Like most school boards across the country, California boards express concern about the increasing role of the state in education policy making, particularly in the areas of curriculum and teacher evaluation, areas which have traditionally been under local control. Boards view themselves as omitted from the state reform agenda and placed in a reactive position with respect to state initiatives, rather than as partners in the reform effort. Most boards feel a lack of power in dealing with the policymaking aggressiveness of the state.

Board members are often criticized for representing too narrow a segment of the community. The IEL study indicates that there is a national trend toward increasing the representation of diverse community constituencies on school boards. The salience of this issue in California is reflected in the introduction of a bill (defeated in the last weeks of the 1987 legislative session) which would have mandated separate electoral districts (rather than at-large elections) in hopes of achieving broader community representation. Only a few cities in California do not use the at-large election option.

Although individual school board candidates do not necessarily identify themselves with specific constitutencies within a community, it is estimated that approximately 25 percent of board members do represent special interest groups, most frequently related to support from a local teacher organization. In California, as elsewhere, newly elected board members are frequently more closely affiliated with specific interest groups which have played a large role in their candidacy and election. According to the IEL study, board members representing diverse constitutencies may help to ensure a broader range of community participation, but they
may also be less accepted by traditional community leaders and less able to negotiate existing power structures.

The degree to which school board members retain their allegiance to special groups during their tenure on the board is not known. On one hand, some observers contend that after two to five years of involvement, board members often demonstrate a shift of support away from groups they initially represented. Such an example would be a school board member who was supported strongly by alocal teacher organization later "holding fast" on teacher issues or refusing to support teacher strikes. On the other hand, the IEL study suggests that the special-interest focus of some board members has resulted in less emphasis on reaching consensus on issues which are of concern to the entire community.

California school boards are concerned with issues similar to those facing schools in the IEL study: school funding, state mandates and the erosion of local control, centralization in the hands of administrators or legislators, and at-risk students (e.g., pregnant teenagers and substance abusers). Additionally, California school boards must deal with rapidly changing demographics and assimilation of a large immigrant population that now includes one of every six pupils in California.

California school boards continue to grapple with sorting the policy making responsibilities of a board and the administrative duties of a superintendent. In the last few years, superintendent turnover has slowed in Califomia. Observers credit this to a more effective process of superintendent selection, resulting in greater commitment by boards which subsequently work harder to retain their selected superintendents.

The activities of California school boards are primarily related to finance, facilities, personnel, and, to some extent, instruction. With the current emphasis on accountability of administrators, teachers, and students, school boards can no longer afford to ignore the need for self-evaluation and assessment. The IEL national study reveals that 60 percent of the school boards surveyed do not assess their own performance and have difficulty communicating their effectiveness to the public. About one-fourth of California school boards are engaged in self-evaluation efforts, many of them using an evaluation package designed by the Califormia School Boards Association.

## STATE AND LOCAL ORGANIZATION OF EDUCATION

Despite a nationwide emphasis on education and

California's omnibus education reform efforts, the public remains remarkably unaware of the cost of education and the manner in which education is funded. Although the state controls 94 percent of funding for education in California, a 1987 California Teachers Association (CTA)-sponsored poll revealed that the majority of voters still believe that local property taxes provide most of education's funding. ${ }^{4}$ Many voters also believe that funds derived from the state lottery provide a large share of the money required by the public schools, when the lottery in fact provides only three percent. According to the poll, California voters are not convinced that public schools have a compelling rationale for requesting additional funding, and they question the quality and management of existing schools.

The CTA poll revealed that Californians display a considerable lack of understanding about problems confronting public education. Those surveyed demonstrated a lack of information aboutrecentreform efforts targeted to improving education programs in California (e.g.,improvement of basic skills). Although a majority of respondents in the CTA poll believed that schools are getting worse, Califomians still support local control of public education, as reflected by 1983 Field Poll results in which 79 percent of respondents felt there should be more local control over education expenditures.

## Centralization of Control

More recently, a number of external forces are exerting an increasing influence on local education policy and practice. A major influence has been the increasing centralization of education control by the state through such efforts as mandated reforms and increased use of state categorical grants for special-needs propulations. The report by the Commission on School Governance and Management (COSGAM) examines this shift of power from the district to the state level. ${ }^{5}$ According to this report, relationships among the various levels of school governance have grown more complex in recent years, and the boundaries between these levels have become less distinct.

Some of the most significant changes have come about through legislated limitations on the taxing power of local communities and the prohibition of local building bond drives (Proposition 13, 1978). The increased state involvement in financing K-12 public schools is reflected in the fact that the state provides directly for over 69 percent of the cost of this school system through the state's General Fund and finances the vast majority of school construction throughout California. The state, however, is limited in its ability to spend
revenues by the Gann limit (1979). In 1988, there is a movement on the part of citizens and educators to modify the Gann limit formula. These proposed modifications would make more money available for the public sector.

The state's increased financial responsibility for public education has been accompanied by a greater interest and involvement in issues of accountability at the local level. California's 1983 omnibus education reform bill, SB 813, underscored the state role in education policy making and supported additional state inroads into curriculum matters and other education issues that formerly had been reserved for local boards.

## Enhancing Local Flexibility

The COSGAM report recommends that alternative sources of local revenue be developed through local income, sales, or property taxes. COSGAM further recommends that local tax flexibility include school construction funding by majority vote, rather than the currently required two-thirds.

The timing of the budgeting process for public schools is also a frequent source of comment. Since the state has assumed financial control, school districts do not know the amount of funding they will receive until after the school year begins. This makes it difficult for local districts to plan efficiently for the academic year. It has been proposed that the state could devise a budgeting procedure that would guarantee local districts, in advance of the academic year in which it is needed, a baseline level of funding to facilitate district planning.

The COSGAM report recommended that the legislature delegate more authority and fiscal discretion to local sites. It further recommended clarification of the functions of school districts to better equalize education and business services and to make the delivery systems more efficient and effective. This is particularly applicable to unified school districts and county offices of education, which often provide duplicate services to clients within the same area.

The report also recommended that the state consider delegating activities relating to compliance and monitoring to large regional centers which would be located throughout the state. These centers would also be responsible for providing business, professional, and other administrative services. Other possibilities for enhancing local flexibility could include:

- encouraging locally based school site improvement programs, designed by councils of parents, staff, and
students (similar to the School Improvement Program, a categorical program begun in 1977)
- eliminating outmoded, irrelevant, or inflexible state education code sections, some of which which have remained unchanged for over 20 years
- encouraging local schools to petition the State Board of Education for waivers from state code requirements, in order to design education programs which are more suited to specific community needs
- developing state standards sequentially, implementing these standards in volunteer districts, and carefully evaluating their impact before designating them as state mandates


## Influence of the Courts

Another powerful influence on local education policy has been that of the courts. In 1988 there were over 100 active suits against the State Department of Education and the State Board of Education which involved almost all areas of local school operations, including curricular issues and the purported lack of state compliance with categorical program requirements. The courts are important actors in education and further complicate an understanding of who controls California schools.

[^1]
## chapter 6

## Curriculum and Special Programs

Numerous studies on curricular change, both in California and nationally, have been undertaken in the last decade. Although many of the studies attempted to attribute cause for curricular changes in high schools, there is no consensus on the primary impetus of change. A national study of school board members published in 1985 maintains that school boards are responsible for curricular changes; school board members reported that the major impetus for change came from the local, not the state, level.

Other studies have linked local curricular changes with nonschool-related phenomena. For example, Proposition 13 in California played a significant role in the curricular retrenchment that followed. Still other studies point to legislative initiative as the precursor for local high school curricular changes.

It is clear in recent California history that state-level forces, external to the schools, have played the dominant role in curricular change in California's public schools. There are significant external forces, including the University of California, California State University, State Board of Education, superintendent of public instruction, legislature, and governor, that exert a strong influence on high school curriculum. A number of such forces are at work altering local course offerings. These actions by the legislature, State Department of Education, State Board of Education, and institutes of higher education will be examined in turn.

## STATE LEGISLATIVE ACTION

Infusions of state dollars, primarily due to the passage of Senate Bill 813, California's omnibus school reform bill, have enabled districts to restore major curriculum offerings that were eliminated during the immediate post-Proposition 13 era. More specifically, districts were given incentives to expand the length of their school day. (Many schools were previously forced by financial exigencies to a five-period day.) Now the vast majority are again able to offer at least six periods.

## HIGHLIGHTS

- An amalgam of state and national influences has generated substantial change in the high school curriculum. The state legislature's enactment of SB 813 and the establishment of new graduation requirements have led to enrollment increases in newly required subject-matter areas, such as science and foreign language. In addition, subsequent legislative action requiring a course in economics has led to a large enrollment increase in that subject.
- The State Board of Education's promulgation of model graduation requirements and adoption of new curriculum frameworks and guidelines has stimulated a more rigorous and academically concentrated high school curriculum. Large enrollment increases in world history and in the physical and life sciences are at least partially the result of these efforts.
- Recent University of California and California State University changes in admission requirements have triggered enrollment increases in newly required courses, especially in science and mathematics. The fact that the California State University is now requiring one year of instruction in the visual and performing arts may at least partially account for increased enrollments in art, music, and drama courses in the current year, a change which reversed a sustained decline in art and music.
- Black and Hispanic students, although beginning to enroll in academically oriented secondary classes in larger numbers, continue to be underrepresented in courses required to gain college admission.
- Fewer electives are being taken in every subjectmatter area. Students are attempting to accommodate the increased number of courses required for graduation and for entrance into four-year public colleges. The result is less time for elective or optional courses.
continued

Senate Bill 813 also increased high school graduation requirements to:

3 years of English
2 years of mathematics
2 years of science
3 years of social science
1 year of foreign language or fine arts
2 years of physical education (previously required)
State legislation (ACR 14, 1983) urged the State Board of Education to require each school district governing board to compare its existing graduation requirements and curriculum standards with the model standards developed by the state board. Senate Bill 1213 (1985) added a semester of economics as a high school graduation requirement.

## STATE BOARD OF EDUCATION AND STATE DEPARTMENT OF EDUCATION

The State Board of Education adopted model high school graduation standards which challenge local school districts
to raise their sights and to recognize what is necessary to achieve excellence in education. If they meet the Board's challenge, local districts will be involved in the development of their own high school graduation requirements, and local communities will participate in the comparison of local standards to those of the model. Only such participation can result in the necessary commitment for effective reform.
The recommendations include:
4 years of English
2 years of science (a year each of physical and life science)
3 years of mathematics (including algebra and geometry)
3 years of social sciences, including:
1 year of world civilizations
1 year of U.S. history
1 semester of government
1 semester of economics
2 years of the same foreign language
1 year of visual and performing arts
1 year of computer studies

The State Department of Education has been developing curriculumframeworks in all basic subjects for several years. Curriculum frameworks are state-disseminated documents developed in concert with local teachers, curriculum content

- In virtually every subject-matter area, remedial courses have been reduced substantially as the high school curriculum becomes more rigorous and uniform.
- The long downward spiral in enrollments in music and vocational education may have been reversed as 1986-87 enrollments have increased in each of these areas.
- In addition to the general revenue limit that provides unrestricted financing for schools, Califomia has 70 separate categorical programs or funding sources.
- State categorical funding totaled $\$ 3.9$ billion in 1986-87.
- Significant areas of local flexibility were created by the governor's 1987 veto of extensions for five categorical programs: Miller-Unruh Reading, School Improvement Program, Bilingual Education, Economic Impact Aid, and Indian Early Childhood Education.
- California is streamlining, consolidating, and focusing categorical programs on a core curriculum, largely through actions of the State Department of Education.
experts, and university professors. They are designed in part to provide an ordering of the subject-matter content and sequence of topics, identify themes with applicability across a range of issues and areas, and suggest teaching strategies. The frameworks are not mandated for use by local districts, but since the onset of state education reform efforts in 1983, the frameworks have assumed greater importance and influence.

Science and mathematics were the first content areas addressed under a systematic effort to upgrade curriculum. The state is in the process of updating the language arts curriculum, with social science to follow. Frameworks are developed by committees, including the leading experts in the state on the topic, and include a mixture of classroom teachers, district and county office curriculum coordinators, and university professors.

While the frameworks cover the K-12 curriculum, they are developed for the purpose of influencing substantively the textbook adoption process. Since California adopts texts only for K-8, emphasis has been given to the K-8 portion of the frameworks. Senate Bill 813, however, targeted grades 9-12, and required the department to develop more detailed model curriculum standards for those grade levels. It also mandated each local district to compare its $9-12$ curriculum to the state
model curriculum standards. Model curriculum standards, which cover science, mathematics, language arts, social science including U.S. and world history, and foreign language and fine arts, were disseminated in 1985.

The curriculum framework development and textbook adoption endeavors are multiple-year processes and, at least theoretically, are arranged in a sequence so one coincides with the next. Frameworks are released about one year before the textbooks proposed for adoption need to be approved by the State Board of Education.

A secondary purpose for the curriculum frameworks is to suggest to local districts the manner in which a subject-matter curriculum should be conceptualized and how it should be assessed. The tight connection between the frameworks, the textbook adoption process, and the state testing program provides the framework added influence locally, even absent a state mandate for its use.

In addition, frameworks have generally been well received by school districts and utilized by local curriculum specialists, at least partially because they are judged to be thoughtfully designed.

The State Department of Education is also now finalizing model curriculum guides in science and mathematics for grades K-8. Guides contain more detail than frameworks, actually providing examples of classroom strategies for teaching in each content area. Since the mathematics curriculum especially but also the science curriculum vary substantially from standard school curriculum and practice, the state department, responding to pressure from local districts, just recently decided to produce these model curriculum guides.

The overall goal is to change drastically the entire concept of curriculum for grades K-8 and for the bottom 80 percent of students, from fragmented content areas to an integration of the content, processes, and meaning of each content area around topics and issues related to real life. The objective is to teach students how to use and apply content knowledge and process skills to problems and challenges in everyday life, thus connecting academic or school curriculum to life outside the school.

The philosophy of curriculum at the state level is broad and not simply content bound. Curriculum includes (1) specific content, (2) lesson strategies, (3) learning activities, (4) instructional materials, (5) learning outcomes, and (6) assessment instruments. Curriculum content also is more than a skills continuum (e.g., reasons for wars) and includes specific content (e.g., reasons for the Viet Nam War and World War II). Curriculum alignment involves matching all six pieces. The notion that a board decides curriculum and
teachers implement it is not accepted. The philosophy is that curriculum is more integrated and cannot be so neatly separated.

The goal for students is knowledge and skills, problemsolving capabilities, self-confidence in a subject area, ability to deal with ethical issues related to the subject area, and citizenship and social skills. The state believes that classroom activities should address all goals.

In order to raise standards and expectations for students, teachers, and schools, the State Department of Education also has established a three-phase accountability program for the state's public high schools. A specific goal is to increase the number of students academically prepared for college. Phase one involved setting state goals for improvement on specified "quality indicators." Phase two involves preparing individual performance reports for each high school and district and comparing their performance with state goals. Phase three involves encouraging each local school and district to develop their own local accountability reports with appropriate goals.

## TEXTBOOK ADOPTION

The overall goal of California's textbook adoption process is to align curriculum statewide, including texts, curriculum frameworks, and California Assessment Program (CAP) tests. Broadly conceived, curriculum includes content, teaching materials (texts), pedagogy, and testing/assessment instruments.

Textbook adoption committees use the content of state curriculum frameworks to prepare criteria for textbook publishers. The final phase of the textbook adoption process is recommendation by a state curriculum commission to the State Board of Education. During these final evaluation phases the state superintendent cooperates closely with key staff serving on committees to evaluate the texts and agree on a recommendation, which he ultimately makes to the board.

The specific purpose of the state textbook adoption cycle is to have districts use state-adopted texts and, now, to improve overall curriculum by using better texts. Another purpose today is to induce publishers to produce better, sounder, more rigorous texts. Superintendent Bill Honig and the State Board of Education, for example, recently rejected and returned to publishers for improvements both science and mathematics texts.

The state adoption model is "driven" by the content of the curriculum frameworks, so the state provides the content from which publishers can develop texts and from which each district can select the resources they wish to use to implement
these frameworks. The results of the entire process are then evaluated at the state level with California Assessment Program (CAP) tests.

## THE CALIFORNIA ASSESSMENT PROGRAM

The purpose of the California Assessment Program (CAP) is to "lead" and assess the curriculum at state and local levels by weaving common threads of content and higherlevel thinking skills now embodied in state curriculum frameworks and texts. Since CAP is mandated for all students in grades $3,6,8$, and 12 , and scores are released to the press, local schools and districts pay attention to their scores. Annual CAP reports have three years of data and are sent to schools in November-December of each year.

California's education reform expanded CAP to include grade 8. The content tested was also expanded from reading and mathematics to science, social studies, and a direct writing assessment. Reading also stressed content by including passages of science and social science, and thus reinforced the subject-matter portions of CAP. The grade 8 CAP is the first to cover the full range of content areas for CAP testing. History/social science was added in 1984-1985, and science was added in 1985-86. Beginning in the spring of 1987 , the grade 8 test included a direct assessment of students' writing.

Plans are in place to change the 12 th grade CAP. First, the basic skills focus of reading and mathematics will be replaced by a higher-level thinking skills focus for reading and mathematics. Second, science and social studies will be added as new content areas. Third, it will include direct writing assessments.

Annual CAP reports to schools and districts are used to compare improvement of academic achievement from one year to the next. The reports delineate each subject area's skills so that a school can easily determine areas of strength and weakness to be addressed the following year. Unlike many other standardized tests which are composed of a small number of items and whose security is much more vulnerable, CAP is a "matrix sample" type of test in which each subject area is tested by a large number of items, only a small portion of which are taken by any student. The selection of test questions, therefore, varies for individuals within the same classroom. While this system does not allow the development of individual pupil scores, it provides a highly reliable and robust measure of the subject matter in question.

The philosophy of the State Department of Education is that CAP is a model for what children should learn and an instrument for feedback to community and legislators. CAP
is a curriculum-oriented program of accountability to let schools know how well they are doing.

## HIGHER EDUCATION

Historically, high schools have been attentive to changes in admission requirements of the postsecondary institutions and other higher education-initiated curricular directions.

Academic Senates of the three segments of public higher education jointly adopted and have widely disseminated their Statement on Competencies in English and Mathematics Expected of Entering Freshmen, ${ }^{1}$ intended to assist students in preparing for college, their parents and counselors in advising and course selection, and high school teachers and administrators in planning curriculum.

The University of California, California State University, and many prestigious private colleges and universities now award extra weight in computing grade point averages for admission for "Honors" and "Advanced Placement" classes in order to encourage students to take more difficult courses.

The University of California's entrance requirements have long been viewed as a primary determinant of high school curriculum. Because the required course sequence has six components, listed under the letters a-f, these high school courses are commonly referred to as "a-f courses." The current University of California a-f requirements include:

4 years of English
3 years of mathematics
1 year of laboratory science
1 year of U. S. history or U.S. history and government
2 years of the same foreign language
4 years of approved electives

Of special interest because of the magnitude of the change and the importance of its impact are the new entrance requirements implemented by the California State University. From 1965 through 1983, the California State University admission criteria for first-time freshmen did not include specific high school course requirements.

Students were eligible for admission if they possessed a high school diploma and had a sufficiently high score on CSU's Eligibility Index, a weighted combination of high school grade point average (GPA) and score on either the total score on the Scholastic Aptitude Test (SAT) or the composite score on the American College Test (ACT). The Eligibility Index was monitored and adjusted periodically. Students with GPAs above a specified level were eligible for admission
irrespective of their score on the standardized test.
The intent of these requirements was to create a pool of eligible students equal to the top one-third of the high school graduating class, consistent with the state's Higher Education Master Plan (1960) directive that CSU serve the top one-third of California public high school graduates.

In 1981, CSU trustees, concerned that many students were coming to their system's campuses ill-prepared for college, added specific course requirements in English (four years) and mathematics (two years). These revisions were first effective for students entering CSU in the fall of 1984. In addition, in November 1984, the trustees directed the chancellor to develop recommendations conceming additional courses that should be required for entrance.

In response to that directive, the chancellor submitted a report to the trustees which led to the adoption in November 1985 of a resolution requiring a comprehensive course pattern of college preparatory subjects to become effective for firsttime freshmen applicants commencing in the fall of 1988. The trustees subsequently adopted the following comprehensive pattern of college preparatory subjects as an element of admission requirements. These additional requirements were to be effective in the fall of 1988 for all regular admittees:

4 years of English (presently required)
3 years of mathematics (2 years presently required)
1 year of U.S. history or U.S. history and government
1 year of laboratory science
2 years of foreign language (or competency)
1 year in the visual and performing arts
3 years of approved electives
As the California State University began to implement these new entrance requirements, it became clear that not all high schools were offering, nor were enough students taking, the required course pattern. Therefore, CSU modified its initial requirements by allowing conditional admission under the following schedule.

Those conditionally admitted will still be required to complete the requirements prior to graduation from college but can do so by taking university courses that serve the dual purpose of applicability to CSU's general education requirement as well as removing the deficiency:

Fall 1988 At least 10 of the required 15 units, among which are included at least 6 of the 7 units in English and mathematics.
Fall 1989 At least 12 of the required 15 units, among which are included at least 6 of the 7 units in

> English and mathematics.

Fall 1990
At least 14 of the required 15 units, among which are included at least 6 of the 7 units in English and mathematics.
Fall 1991 At least 14 of the required 15 units, among which are included at least 6 of the 7 units in English and mathematics.
Fall 1992 Full implementation.

The California State University system has thus moved to a set of entrance requirements that closely approximate entrance requirements of the University of California. Although concern has been expressed about the potential negative impact on minority students in higher education, CSU has been remarkably flexible in altering the timeline for full implementation.

In sum, a variety of forces external to high schools in California have combined, in an unprecedented manner, to create a cumulative pressure for change in high school curriculum. Although proposed changes have been generated from an array of sources, the changes are remarkably consistent and send reasonably clear signals to schools. Change of such magnitude does not come easily, however, and will undoubtedly require long-term, sustained effort to implement.

The following section examines California high school responses to these pressures for change.

## HIGH SCHOOL CURRICULAR CHANGES

The cumulative effect of external pressures for a more academically oriented curriculum has led high schools to adopt a more rigorous curriculum. Increases in enrollment in academic courses and concomitant declines in remedial courses and electives, along with declines in other areas of the curriculum not required for high school graduation or for entrance into the University of California or California State University, have occurred.

## Course Enrollments

Figures 6.1 through 6.3 display enrollment changes in courses for two time periods. The first displays a longerrange, five-year view depicting enrollment changes by sub-ject-matter area from 1981-82 to 1986-87. The second displays data from the two most recent years, 1985-86 to 198687. Each data set is corrected for enrollment changes that occurred doing these periods.

It is important to note that overall subject-matter trends may mask course enrollment trends occuring within subjectmatter categories. For example, although English enrollment is down slightly in the five-year data, there are substantial variations within English: advanced placement English en-
rollments are up spectacularly while "developmental reading ${ }^{" 2}$ has declined by almost one-third; many elective English courses such as journalism and forensics have also declined in enrollment. In fact, the decline in developmental reading alone accounts for the overall decline in English enrollments.

FIGURE 6.1 Percent Change in Enrollment by Subject Matter Area, 1981-82 to 1986-87 and 1985-86 to 1986-87 (corrected for enrollment change)

| Subject | $1981-82$ to $86-87$ | $1985-86$ to $86-87$ |
| :--- | :---: | :---: |
| Science | 45.04 | 4.18 |
| Drama | 32.69 | 9.30 |
| Foreign Language | 31.62 | 5.10 |
| Mathematics | -0.64 | -1.12 |
| English | -6.48 | -2.24 |
| Social Science | -8.91 | -0.55 |
| Art | -10.37 | 7.74 |
| Vocational Educ. | -16.79 | 8.34 |
| Music | -40.30 | 0.15 |

SOURCE: PACE analysis of California Basic Educational Data System (CBEDS) data.

FIGURE 6.2 Percent Change in Course Enrollment, Adjusted for Changes in Total Enrollment, 1981-82 to 1986-87


Note: These cumulative changes may differ somewhat from similar changes reported in previous PACE reports, most notably in mathematics. Three reasons account for the differences: an earlier base year, recent enrollment declines, and the inclusion in previous analyses of computer science. However, analysis of enrollment changes within subject areas does continue to demonstrate large-scale trends toward higher level mathematics and science, consistent with California's school reform objectives.

SOURCE: PACE analysis of California Basic Educational Data System (CBEDS) data.

FIGURE 6.3 Percent Change in Course Enrollment, Adjusted for Changes in Total Enrollment, 1985-86 to 1986-87


SOURCE: PACE analysis of California Basic Educational Data System (CBEDS) data.

Major trends within subject matter areas include:

## English

- Advanced placement English underwent substantial increases ( $81.88 \%$ ) which appear to be leveling off in the current year ( $0.56 \%$ ).
- Developmental reading ( $-33.24 \%$ ) has declined sharply and continues to decline in the current year.
- Comprehensive English courses in grades 9-12 continue to increase ( $26.57 \%$ ).
- All literature courses (American, 44.05\%; English, $6.82 \%$; world, $15.85 \%$, and ethnic, $12.71 \%$ ) show substantial increases as does enrollment in English as a second language ( $16.03 \%$ ).
- Journalism (-8.48\%), forensics (-13.51\%), all composition courses $(-17 \%)$, and most other electives show patterns of consistent decline.


## Foreign Language

- Foreign languages generally display large increases, with the largest gains in the two most popular language courses, Spanish (29.45\%) and French (33.24\%).
- Dramatic increases are alsoevident in advanced (beyond levels 1 and 2) language courses, e.g., Spanish ( $83.45 \%$ ), French ( $43.80 \%$ ), Latin ( $91.38 \%$ ), and German (10.16\%).


## Music

- Losses in music enrollment have been substantial, with a 40.3 percent decline from the 1981-82 fig-
ures. The latest comparison, however, shows that declines have begun to level out, and there is a slight increase (0.15\%) in 1986-87.
- Within music, enrollment in band has suffered the most. Band enrollments have declined by over 50 percent ( $-54.33 \%$ ) since $1981-82$, and in spite of the slight upturn last year in overall music enrollments, band continued to decline ( $-4.16 \%$ ) in 1986-87.


## Mathematics

- Overall, mathematics enrollments have declined very slightly $(-0.64 \%)$ over the past five-year period.
- The overall decline in mathematics enrollment is more than accounted for by large-scale declines in consumer mathematics ( $-22.60 \%$ ) and remedial mathematics ( $-60.78 \%$ ).
- However, course enrollment patterns from 1982-83, the year before SB 813 was enacted, to 1986-87 reveal a rise in overall mathematics enrollments of 9.4 percent.
- College preparatory mathematics enrollment increased in virtually every subject: beginning algebra ( $19.42 \%$ ), intermediate algebra ( $71.60 \%$ ), plane geometry ( $28.39 \%$ ), solid geometry (1.54\%), trigonometry ( $31.29 \%$ ), and probability/ statistics ( $136.35 \%$ ).
- Substantial percentage increases also occurred in higher-level mathematics courses such as calculus, which more than doubled ( $166.11 \%$ ), and pre-calcalus, which almost doubled ( $86.47 \%$ ).


## Science

- Science enrollment in the five-year period grew spectacularly and virtually across the board, characterized by growth in more advanced courses (advanced biology, $33.58 \%$; advanced chemistry, $95.59 \%$; and advanced physics, $194.22 \%$ ) and in physical science ( $301.77 \%$ ) and earth science ( $108.58 \%$ ).
- The few declines in science courses occurred in electives such as astronomy ( $-3.00 \%$ ), oceanography $(-25.32 \%)$, anatomy ( $-7.84 \%$ ), and meteorology (-12.72\%).


## Social Science

- Social science enrollments declined substantially over the five-year period with large growth occurring only in economics ( $199.78 \%$ ) and world history ( $58.49 \%$ ).
- The decline occured most heavily in electives such as geography ( $-32.87 \%$ ), introduction to the social sciences ( $-56.23 \%$ ), California history ( $-85.58 \%$ ), psychology ( $-20.54 \%$ ), current events ( $-77.87 \%$ ), sociology ( $-57.34 \%$ ), and anthropology ( $-62.04 \%$ ).


## Art

- Art enrollment experienced moderate losses over the five-year period ( $-10.37 \%$ ) but reversed the downward trend with a solid increase $(7.74 \%)$ across the entire art curriculum last year.
- The large five-year declines are characterized by drops in enrollment in such courses as ceramics $(-17.84 \%)$, crafts $(-34.64 \%)$, painting $(-29.43 \%)$, and jewelry (-48.37\%).
- Gains in enrollment occurred in photography ( $13.93 \%$ ), art appreciation ( $25.69 \%$ ), art history (76.86\%), and basic art (24.22\%).


## Drama

- Although percentage enrollment gains are high, this is a small field. The latest gains continued the five-year pattern.


## Vocational Education

- Vocational education sustained losses in enrollment over the five-year period ( $-16.79 \%$ ), but recent evidence indicates that the bottom of the decline has been reached as $1986-87$ enrollments are up ( $8.34 \%$ ) and virtually throughout the vocational education curriculum.

The State Department of Education disseminates statewide course enrollment information designed to monitor progress toward a more intense academic curriculum of history, government, science, mathematics, and literature. Changes are noted from 1983-84 to 1986-87, a period of focused state and local school reform activity, and demonstrate gains in all areas (Figure 6.4). ${ }^{3}$

FIGURE 6.4 Course Enrollments, Percent Change 1983-84 to 1986-87

| Percent Change <br> Courses | 1983-84 to 1986-87 |
| :---: | :---: |
| Mathematics |  |
| 3 of more years | +14.6 |
| Advanced mathematics | +9.3 |
| English |  |
| 4 or more years | +17.2 |
| Science |  |
| 3 or more years | +19.5 |
| Chemistry | +17.2 |
| Physics | +6.4 |
| History/Social Science |  |
| 4 or more years | +10.1 |
| Foreign Language |  |
| 3 or more years | +5.4 |
| Fine Arts |  |
| 1 year art/music/drama/dance | e +10.2 |

SOURCE: State Department of Education, Performance Report for California Schools 1987.

## HIGH SCHOOL CURRICULUM AND STUDENT PARTICIPATION IN HIGHER EDUCATION

Of special relevance to admission to the state's four-year colleges is the number of students enrolled in courses meeting the a-f requirements for the University of California. PACE analyzed school-by-school data compiled by the Research and Information Technology Unit of the State Department of Education which compared the 1984-85 and 1985-86 re-
ported enrollment in courses certified to meet the University of California's a-frequirements. Because the California State University admission requirements are now so similar to admission standards established by UC, it is reasonable to assume that one can predict the future enrollment patterns for both segments by utilizing change data for the a-f courses. The State Department of Education reports that total enrollments in these courses increased from 38.2 percent to 43.6 percent from 1984-85 to 1985-86, a 14.1 percent increase.

The state department also collects data regarding the percentage of graduates from each high school who have completed the a-f course requirements. Itreports that of those students who graduated from high school in 1984, 27.5 percent have completed all of the a-f requirements.

PACE analyzed these data by school and found striking variation among high schools in the percentages of their students who have completed the required courses. Sixtyseven percent of the schools reporting show completion rates of 30 percent or less, and only about seven percent of the schools report a rate of a-f completers exceeding 50 percent of their high school graduates (Figure 6.5).

## FIGURE 6.5 a-f Completion Rate

| Rate of <br> Completion* | Number of <br> High Schools |
| :---: | :---: |
| $<10 \%$ | 76 |
| $11-20 \%$ | 216 |
| $21-30 \%$ | 201 |
| $31-40 \%$ | 117 |
| $41-50 \%$ | 70 |
| $51-60 \%$ | 19 |
| $61-70 \%$ | 14 |
| $71-80 \%$ | 1 |
| $81 \%+$ | 7 |

* Percent of high school graduates completing the a-f
requirements.

Schools which tended to have smaller percentages of a-f completers can be characterized as having lower parent education indexes, higher percentages of AFDC eligibles, and higher percentages of black and Hispanic students. Schools with low completion rates could be found in both urban and rural settings.

To gain some additional insight on the impact of socioeconomic status on the number of a-f completers, PACE analyzed the percent of a-f completers in the 25 largest school
districts in California (comprising approximately 34 percent of the state's total enrollment). Using the reported parent education index, substantial differences were found between schools' completion rates. Schools which ranked in the top quartile on parent education had a completion rate of 38.4 percent, substantially higher than the state average of 28.8 percent and almost double that of schools in the bottom quartile which had an average rate of only 19.5 percent.

In sum, low-income, black, and Hispanic students lag substantially behind their counterparts in a-f enrollment and a-f completion rates. Schools which these students attend can be characterized as offering fewer opportunities to this growing segment of the population.

Further evidence is available from California Basic Educational Data System (CBEDS) data tapes regarding advanced course enrollment (Figure 6.6). This information is particularly important for purposes of monitoring coursetaking patterns over time. The trends appear to be toward enrollment in more academic courses.

Blacks and Hispanics are still underrepresented in these courses and in completing the courses necessary for admission to the public four-year colleges. The 1983 Califomia Postsecondary Education Commission high school eligibility study, for example, found that only 10.1 percent of blacks and 15 percent of Hispanics were eligible to enter the California State University as regularly admitted students directly out of high school, compared to 33.5 percent of whites and 49 percent of Asians. Data from 1985-86 advanced course enrollment by ethnicity do not portray a significantly different landscape (Figure 6.7).

Comparison of these data for the last two years by subject provides a more developed picture (Figure 6.8).

Not only is the percentage of Asians/Filipinos enrolled in these courses higher than each of the other ethnic groups, but the rate of increase is also higher in mathematics and physics. Only in chemistry did the percentage of black and Hispanic enrollees increase at a greater rate than whites and Asians. While black and Hispanic enrollment percentages grew in physics, the rate of growth was in each case less than that of Asians. In advanced mathematics, percentages of blacks were down and Hispanics were up as percentages declined overall. Obviously, the gap between black and Hispanic participation rates in these advanced classes did not close appreciably.

Combining enrollments in both physics and chemistrysince either is presumably applicable for admission pur-poses-presents a more optimistic picture with growth rates among blacks and Hispanics exceeding the overall growth rate, but large disparities still remain.

FIGURE 6.6 Advanced Course Enrollment, 1983-84 through 1985-86

| Courses | $1983-84$ | $1984-85$ | $1985-86$ | Difference | \% Change |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Advanced Math. <br> Courses above Alg.I <br> Science <br> Chemistry | $28 \%$ | $32 \%$ | $33 \%$ | $5 \%$ | $18 \%$ |
| Physics | $25 \%$ | $31 \%$ | $37 \%$ | $12 \%$ | $48 \%$ |
| Adv. Sci. | $10 \%$ | $12 \%$ | $14 \%$ | $4 \%$ | $40 \%$ |
| U. C. Requirements <br> a-f enrollments <br> a-f completions | NA | NA | NA | $49 \%$ | NA |
|  | NA | $44 \%$ | NA | NA |  |
|  |  | NA | $28 \%$ | NA | NA |

FIGURE 6.7 Enrollment in Advanced Courses by Ethnicity, 1985-86

| Ethnicity | Adv. Math. | Physics | Chemistry |
| :--- | ---: | ---: | :---: |
| All Students | $13.2 \%$ | $14.8 \%$ | $39.2 \%$ |
| White | $13.9 \%$ | $15.2 \%$ | $40.6 \%$ |
| Black | $6.1 \%$ | $7.6 \%$ | $29.8 \%$ |
| Hispanic | $6.0 \%$ | $6.4 \%$ | $25.3 \%$ |
| Asian/Filipino | $33.4 \%$ | $35.2 \%$ | $67.5 \%$ |
| Pacific Islander | $13.9 \%$ | $15.1 \%$ | $32.4 \%$ |
| American Indian | $6.4 \%$ | $7.2 \%$ | $20.2 \%$ |

Note: Advanced mathematics represents the statewide rate of enrollment per 100 juniors and seniors. Also, the definition of advanced mathematics in this display is not the same as the preceding chart. In this chart advanced mathematics is defined as any third- or fourth-year advanced mathematics course. The values for chemistry and physics are the statewide enrollment per 100 seniors.

In sum, impressive gains in both academic course offerings and enrollments, and the fact that in some curricular areas blacks and Hispanics appear to be enrolling in higher numbers, should not mask the fact that many students need substantial assistance if they are to gain access to higher education. Although the pattern of curricular change is positive, it is not uniform. Underrepresented minority groups, while showing some progress in enrollment pattems in academic courses, are still behind their white and Asian counterparts. In addition, schools with large percentages of lowincome and minority youth, on average, offer fewer academic courses.

## CATEGORICAL FUNDING

California has one of the most elaborate structures of
categorical funding in the United States. There are 70 separate categorical funding sources. Categorical funds are revenues made available to local school districts by the state and federal governments for specific purposes. Since Proposition 13 in 1978, California has virtually no local property tax leeway for current operating expenditures. Consequently, most of the categorical programs do not require local matching funds.

There are several operational definitions for categorical programs. The one PACE uses excludes district revenue limits, teachers' retirement, instructional time incentives, necessary small schools, summer school, revenue limit equalization, and county office revenue. These are funding formulas and not essentially programs. Using this definition, state categorical funding totaled $\$ 3.9$ billion in 1986-87.

Despite much debate about the number of categoricals, California added more categorical programs through its
school reform legislation (SB 813) in 1983. Some of the largest and most significant were:

- minimum teacher salaries
- longer school days and years
- mentor teachers
- administrator training centers
- 10th grade counseling

However, the governor eliminated three categorical programs in his 1987 budget vetoes:

- teacher instructional improvement grants (CTIIP)
- staff development (AB 551)
- education technology centers in county offices of education

FIGURE 6.8 Enrollment in Advanced Courses by Ethnicity and Subject, 1984-85 to 1985-86

| Ethnicity | $84-85$ | $85-86$ | Difference | \% Change |
| :--- | ---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  | Advanced Mathematics |  |  |  |
| All 13.9\% | $13.2 \%$ | $-0.7 \%$ | $-5.0 \%$ |  |
| White | $14.8 \%$ | $13.9 \%$ | $-0.9 \%$ | $-6.1 \%$ |
| Black | $6.8 \%$ | $6.1 \%$ | $-0.7 \%$ | $-10.3 \%$ |
| Hispanic | $5.7 \%$ | $6.0 \%$ | $+0.3 \%$ | $+5.3 \%$ |
| Asian/Fil. | $31.7 \%$ | $33.4 \%$ | $+1.7 \%$ | $+5.4 \%$ |
| Amer. Ind. | $7.6 \%$ | $6.4 \%$ | $-1.2 \%$ | $-15.8 \%$ |
|  |  |  |  |  |
|  |  | Physics |  |  |
| All 13.5\% | $14.8 \%$ | $+1.3 \%$ | $+9.6 \%$ |  |
| White | $14.2 \%$ | $15.2 \%$ | $+1.0 \%$ | $+7.0 \%$ |
| Black | $6.6 \%$ | $7.6 \%$ | $+1.0 \%$ | $+15.2 \%$ |
| Hispanic | $5.8 \%$ | $6.4 \%$ | $+0.6 \%$ | $+10.3 \%$ |
| Asian/Fil. | $30.4 \%$ | $35.2 \%$ | $+4.8 \%$ | $+15.8 \%$ |
| Amer. Ind. | $10.8 \%$ | $7.2 \%$ | $-3.6 \%$ | $-33.3 \%$ |
|  |  |  |  |  |
|  |  | Chemistry |  |  |
| All 32.3\% | $39.2 \%$ | $+6.9 \%$ | $+21.4 \%$ |  |
| White | $34.6 \%$ | $40.6 \%$ | $+6.0 \%$ | $+17.3 \%$ |
| Black | $21.7 \%$ | $29.8 \%$ | $+8.1 \%$ | $+37.3 \%$ |
| Hispanic | $17.4 \%$ | $25.3 \%$ | $+7.9 \%$ | $+45.4 \%$ |
| Asian/Fil. | $57.0 \%$ | $67.5 \%$ | $+10.5 \%$ | $+18.4 \%$ |
| Amer. Ind. | $19.2 \%$ | $20.2 \%$ | $+1.0 \%$ | $+5.2 \%$ |


|  | Combined Physics and Chemistry |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| All 45.8\% | $54.0 \%$ | $+8.2 \%$ | $+17.9 \%$ |  |
| White | $48.8 \%$ | $55.8 \%$ | $+7.0 \%$ | $+14.3 \%$ |
| Black | $28.3 \%$ | $37.4 \%$ | $+9.1 \%$ | $+32.2 \%$ |
| Hispanic | $23.2 \%$ | $31.7 \%$ | $+8.5 \%$ | $+36.6 \%$ |
| Asian/Fil. | $87.4 \%$ | $102.7 \%$ | $+15.3 \%$ | $+17.5 \%$ |
| Amer. Ind. | $30.0 \%$ | $27.4 \%$ | $-2.6 \%$ | $-8.7 \%$ |

Note: Since students can take both physics and chemistry, double counting can occur, which accounts for the fact that the Asian/Filipino rate exceeds $100 \%$.

A description of the major categorical programs follows, but note that the largest categoricals are difficult to change dramatically in terms of structure. Special education amounts to over $\$ 1.1$ billion but cannot easily be block granted or deregulated because of restrictions in federal laws and court decisions. The desegregation assistance program is also controlled by judicial decisions because the state must pay desegregation costs mandated by the courts.

The easiest programs to consolidate are also the smallest, such as the Miller-Unruh Reading Program and secondary school counseling. Some "categoricals" are simply finance allocation formulas, such as transportation and adult education. These are not "programs" in the usual sense because the funds can be used for general purposes. Figure 6.9 provides a fiscal overview of the earmarked funding sources.

The best way to understand the dimensions of California's complex categorical system is to review selected specifics for each one. The last section in this chapter, 198788 State Categorical Aid Programs, provides such a descriptive overview, but note that many of the programs presented are small.

There are various ways to combine these categorical programs into groups that provide a broader perspective on the state role. For example, the legislative analyst has aggregated a teaching and administration cluster (Figure 6.10) and compensatory education cluster (Figure 6.11).

## 1987 LEGISLATIVE ACTION AFFECTING CATEGORICAL PROGRAMS

In July 1987 the governor vetoed AB 37 that would have extended five categorical programs until June 30, 1992. The five programs are (1) Miller-Unruh Reading Act of 1965, (2) School Improvement Program, (3) Bilingual Education, (4) Economic Impact Aid, and (5) Indian Early Childhood Education. The major points of contention between the Democratically controlled legislature and Republican governor concerned the specificity within the bilingual program. However, the level of funding and allocation formulas for each of the five programs under the 1987-88 fiscal year budget were not affected by the veto.

The veto did provide a form of categorical grant deregulation without changing basic structures. Local school districts have more overall programmatic discretion now that some specific regulations have expired. But there are still statutory requirements that the funds remain categorically earmarked, e.g., funds must be used for the "general" or "intended" purposes of the program. And, in the case of

FIGURE 6.9 Selected Categoricals, 1987-88 School Year

| Program | Amount <br> (thousands) |
| :--- | ---: |
| Special Education | $1,103,149$ |
| State Teachers Retirement System | 507,385 |
| Desegregation-Court Ordered | 315,551 |
| Desegregation-Voluntary | 47,233 |
| Child Care | 315,447 |
| Transportation (including Special Ed.) | 289,970 |
| Adult Education | 239,488 |
| School Improvement Program | 229,752 |
| ROC/Ps | 212,059 |
| Economic Impact Aid | 196,952 |
| Instructional Materials | 97,499 |
| Urban Impact/Meade Aid | 86,600 |
| Child Nutrition | 55,993 |
| Mentor Teachers | 49,750 |
| Gifted and Talented Education | 22,510 |
| Driver Training | 20,136 |
| Small District Transportation | 20,090 |
| Miller-Unruh Reading | 19,869 |
| Year Round Incentives | 15,000 |
| Educational Technology | 13,055 |
| Dropouts/High Risk Youth | 12,500 |
| 10th Grade Counseling | 7,603 |
| Vocational Education | 5,200 |
| Demo Programs Reading \& Math | 4,367 |
| Small District Bus Replacement | 3,151 |
| Ag. Voc. Ed. Incentive | 3,000 |
| Specialized Secondary Schools | 2,101 |
| Staff Development | 1,509 |
| Indian Education Centers \& Programs | 1,226 |
| Foster Youth Services | 821 |
| Bus Driver Instr. Training | 811 |
| Environmental Education | 604 |
| Voc. Ed. Student Organizations | 500 |
| CA International Studies | 480 |
| Drug/Alcohol Abuse/Prevention | 440 |
| School Business Pers. Staff Development | 250 |
| Intergenerational Education | 165 |
| School/Law Enforcement Partnership | 150 |
| Classroom Teacher Instructional |  |
| Improvement Grants |  |

SOURCE: Legislative Analyst.

FIGURE 6.10 K-12 Education Support for Programs Relating to Teaching and Administration Local Assistance ${ }^{\text {a }}$ 1985-86 through 1987-88
(dollars in thousands)

| Program 1985-86 | 1986-87 | Estimated 1987-88 | Projected 1988-89 Governor's Budget |
| :---: | :---: | :---: | :---: |
| General Fund: |  |  |  |
| Mentor Teacher Program ........................... $\$ 44,750$ | \$45,750 | \$49,750 | \$62,650 |
| Teacher Education and |  |  |  |
| Computer Centers ......................................12,461 | 12,586 | 0 | 0 |
| Administrator Training and 12,586 |  |  |  |
| Evaluation Program .....................................4,124 | 4,233 ${ }^{\text {b }}$ | 4,202 |  |
| School Personnel Staff |  |  |  |
| Development Program ..................................3,609 | 3,645 | 0 | - |
| SDE/CSU Minority |  |  |  |
| Underrepresentation and |  |  |  |
| Teaching Improvement Program .........................- | 542 | 542 | 1,292 |
| California International 542 |  |  |  |
| Studies Project ...............................................- | 480 | 480 | 880 |
| Pilot Project to Improve |  |  |  |
| Administrative Personnel .................................- | 250 | - | - |
| Classroom Teacher Instructional |  |  |  |
| Improvement Program ................................. 16,900 | 17,200 ${ }^{\text {d }}$ | 0 | 0 |
| Bilingual Teacher Training Program .................. 834 | 842 | 842 | 842 |
| School Business Personnel Staff |  |  |  |
| Development Program .................................... 250 | 250 | 250 |  |
| Subtotals, General Fund ............................. $\$ 82,928$ | \$85,878 | \$56,066 |  |
| Federal Funds: \$85,878 \$56,066 |  |  |  |
| Math and Science Teacher |  |  |  |
| Training Grant ........................................... 55.523 | \$2.405 | \$5,448 | \$5.533 |
| Totals .................................................... $\$ 88,451$ | \$88,283 | \$61,514 | \$71,197 |
| 2 The table does not include staff development programs funded from federal Education Consolidation and Improvement Act (ECIA), Chapter 2 funds. |  |  |  |
| b This amount includes \$31,000 reappropriated from 1985-86. |  |  |  |
| c This amount was transferred from Item 6100-191-001 (d) Item 6420-001-001-California Postsecondary Educatio CPEC's budget for the purpose of contracting for a study <br> d This amount includes $\$ 200,000$ reappropriated from 198 | lassroom <br> mission <br> K-12 staff | cher Instructi <br> EC)-to supp <br> elopment pro | Improvement Prog nent the $\$ 200,000$ pr ms. |

SOURCE: Legislative Analyst.

FIGURE 6.11 K-12 Education Funding for Compensatory Education Programs Local Assistance, 1985-86 through 1987-88 (thousands)

| $\begin{array}{lc} \\ \text { Program } & \text { Actual } \\ \text { 1985-86 }\end{array}$ | $\begin{gathered} \hline \text { Estimated } \\ 1986-87 \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Estimated } \\ \text { 1987-88 } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: |
| General Fund: |  |  |
| Economic Impact Aid .......................................... $\$ 196,252$ | \$197,577 | \$196,952 |
| Miller-Unruh Reading Program .................................19,290 | 19,869 | 19,869 |
| Indian Education: |  |  |
| American Indian Education .................................1.213 | 1.226 | 1.226 |
|  | \$218,672 | \$218,047 |
| Federal Funds: $\$$ |  |  |
| ECIA Chapter 1................................................... $\$ 403,280$ | \$374,083 | \$374,083 |
| Refugee and Immigrant Programs ................................19,836 | 20,340 | 18,677 |
| Subtotals ................................................................. ${ }^{\text {S423.116 }}$ | \$394,423 | \$392,760 |
| TOTALS................................................................ 8639,871 | \$613,095 | \$610,807 |

## SOURCE: Legislative Analyst.

bilingual education, there are also federal legal requirements. For example, categorical funds of all five programs cannot be made part of the district's funds (or used for teacher salary increases) and must be spent on supplementary assistance, such as resource teachers or educational materials. All parent advisory or school site councils remain in force.

There are significant areas of local flexibility that are created by this veto. For example, no specific program approach is now required in bilingual education, there are no state standards for reclassifying pupils from limited-English to fluent-English, and there are no specific proportions of nonlimited-English-proficient students for each classroom. But there will still be bilingual programs supported by state funds with many uncertainties remaining about the teacher certification requirements. Most school districts will merely continue what they were doing in 1986-87 until state law is clarified.

## RETHINKING CATEGORICAL AID: OVERALL STRATEGY

Categorical aid was the subject of intense scrutiny in 1987-88, after several years of little attention by major state policy makers. Governor Deukmejian proposed a significant shift in resources from categorical programs such as Gifted and Talented Education, Urban Impact Aid, and Miller-Unruh Reading to a slight reduction in elementary class size. While this proprosal was defeated in the legislature, the governor vetoed any cost-of-living increase for most categoricals and called for a study of the entire system. Moreover, attempts to
extend the bilingual education program led to a political stalemate with intense partisan differences. Bills were considered that would remove most restrictions from several categorical programs but require a local planning process to formulate a new plan for use of flexible funds. The legislative analyst was extremely critical of the quality of mandated sunset reviews of individual categorical programs by the State Department of Education.

Categorical programs became embroiled in charges by several legislators that too much money was being spent on personnel who were not "regular classroom teachers." It is alleged that restrictions in categorical programs cause an inefficient allocation of resources in favor of project administrators, aides, and specialist teachers. The Republicans tended to be more critical of categorical programs, while the Democrats defended them more rigorously against a variety of charges. The governor's budget vetoes will likely cause controversy and perhaps re-examination of the existing array of programs.

There is considerable disagreement over what constitutes a categorical "program" as contrasted to an earmarked funding source. One way of viewing the categorical concept is to examine all funding that is not included as part of the district revenue limits ( $\$ 7.86$ billion) or the lottery (\$523 million).

The rest of the $\$ 18$ billion in total local revenue is earmarked for something. But there is a big conceptual difference between special education with its program standards and a funding source such as aid to small school districts or urban impact aid that consists of a formula distribution.

Nevertheless, the number and scope of existing restricted funding sources is impressive and accounts for more than half of all local district revenue.

The existing categorical funding system has evolved incrementally and has nooverall rationale. Indeed, a historical analysis of the current array is similar to a geologist examining a mountain. Various residues of programs signify different eras and priorities, including an early focus on target groups (e.g., compensatory education) and most recently embodying the 1983 SB 813 reforms (e.g., mentor teachers). There are many legislators' historical footnotes left as a legacy in the categorical or earmarked sources. Some categoricals leave little discretion about funding levels to the legislator or govemor, such as the rise from $\$ 184.4$ million to $\$ 267.8$ million in court-mandated desegregation.

## Recent Research at the Federal Level: Implications for California

Most major federal categorical programs expired in 1987 and had to be reauthorized. This triggered a large-scale effort to evaluate federal categories, including a $\$ 4$ million Congres-sionally-mandated study of compensatory education. Since many state programs are similar to federal categories, the results of these federal evaluations are useful, particularly with respect to the impact of consolidation (or block grants) and improving compensatory education.

In 1981, as a major initiative of the Reagan administration, Congress approved the consolidation of 32 categorical programs ( $\$ 536$ million) into a block grant that is distributed to local school districts. The funds could be used for any purposes supported by the 32 antecedent programs. While this block grant is not a large amount for any state (about $\$ 48$ million in California), that flexibility in allocation provides a limited test of what school districts will do when there are almost no funding restrictions. The federal consolidation also demonstrates that it is politically feasible to consolidate disparate categoricals.

Several studies of local allocations of the federal block grant concluded: ${ }^{4}$

- The allocation distribution from the federal government to school districts is different after categorical restrictions are removed. Less money went to large cities and more went to suburban and rural districts. Large cities were more successful in securing competitive projects, particularly for desegregation.
- Local spending patterns were also different from those required by categoricals.
- Local spending choices were similar to what California districts did with their first year's lottery money, e.g., 60 percent was spent on instructional materials and equipment, 26 percent on salaries, and 14 percent on other items. ${ }^{5}$ A substantial amount of the equipment involved computers. Larger districts with larger grants spent more on personnel. Funding for desegregation or innovative projects that were major components of the defunct federal categories dropped considerably.
- Local uncertainty about federal funding levels helped cause local priorities for nonrecurring expenditures. The amounts per pupil (about \$9) from the federal block grant were too small to expect achivement effects.
The major studies of the largest federal categorical program (compensatory education, $\$ 4.3$ billion) provide a different perspective. ${ }^{6}$ The federal program Chapter 1 is similar to California's Economic Impact Aid program ( $\$ 196$ million). In 1981, the federal government repealed vast numbers of regulations and urged local education agencies to utilize the flexibility for more effective programs. Federal deregulation of selected categorical restrictions did cause a decline in administrators but no change in program strategy or instructional services.

After two decades, compensatory education approaches are now deeply embedded in the routines of schools. Use of elementary school pull-out programs and the remedial focus is rooted in deep grooves within local administrative routines. Administrative leadership is still oriented to the compliance strategy before 1981 and has little incentive or knowledge about how to reorient instructional strategy. ${ }^{7}$

Students are pulled out of their regular classes and taught for about 50 minutes by a reading or math specialist. Coordination of these pull-out sessions with the regular curriculum is uneven and varies greatly among school districts and even schools within districts. Marginal gains in achievement result in many cases but are insufficient to close the gap with national norms. There are financial disincentives to make a program better because the federal funding is based on the number of low-achieving pupils.

The federal Chapter 1 experience indicates that merely deregulating does not galvanize an outpouring of new local education strategies or tactics. Teachers and specialized administrators need new concepts and skills. Classroom aides who are on a school payroll need to be either better trained or reduced. Incentives need to be included, perhaps on the basis of schoolwide increases in various indicators such as pupil performance.

Both the federal Chapter 1 and California Economic Impact Aid (EIA) share the same problem of lack of concentration of funds among school districts. Chapter 1 reaches 90 percent of California's school districts, and EIA distributes money to 100 percent of districts. This results in thinly spread funds that cannot be focused in the most needy districts that have very high percentages of disadvantaged youth. In SB 813, the California legislature decided to spread the funds more widely among school districts. The California legislature may want toreconsider this funding concentration issue as the federal government is now doing.

California has been improving its delivery system for categorical programs largely through actions of the California State Department of Education. This includes further refinements in the Consolidated Application for most categorical programs which rely heavily on computer-based data provided by the state to local applicants.

The State Department of Education's procedures for field compliance review are now coordinated among categoricals. This has eliminated most categorical bureaucratic fiefdoms in Sacramento. There is a single consolidated compliance division that focuses on key issues; thus field reviews are more collegial and problem-solving oriented. Moreover, the state teams of field compliance officers have been replaced partially by consortiums of local educators who review each other's plans. ${ }^{8}$

Even more impressive have been the State Department of Education's efforts to integrate the categorical approach with the concept of a core curriculum that all students should learn. This mitigates the tendency to provide special-needs pupils with a watered-down and slower-paced curriculum. State categorical field reviews focus to a considerable extent on issues concerning the common core curriculum. The state curriculum guides are being meshed with the categoricals.

PACE knows of no other state making similar progress on streamlining, consolidating, and focusing on a core curriculum. In 1983, the legislature repealed several restrictions on the local option of designing school-based consolidations of several categoricals. It is unclear why only three percent of schools statewide use this option to have a school-site-based coordinated plan (AB 777). ${ }^{9}$

## ALTERNATIVES FOR IMPROVING CALIFORNIA CATEGORICALS

This recent progress in State Department of Education administration does not obviate the need to reconsider the current categorical structure. Several alternatives will be
discussed:

- A block grant of several categories that could then be used for any purpose a school district deems necessary (similar to a lottery fund).
- Emulate the federal consolidation by block granting numerous categoricals but restricting use of the block grant to the purposes designated in the programs that were consolidated.
- Block grant several categories but specify that money must be used for a school improvement plan as provided under $A B 65$ with current revisions stressing close integration with the core curriculum. More funds could be earmarked for sites with high concentrations of disadvantaged children.
- Block grant with money distributed to merit schools that display outstanding increases on performance indicators such as achievement, attendance, dropouts, and rigorous course taking. Florida operates such a program now with considerable success. The "merit school" could be required to prepare a school improvement plan similar to the process in the item immediately above. ${ }^{10}$
Before eliminating categorical programs, the quality of program evaluations should be improved and the sunset process reconsidered to include better data as well as a focus that extends beyond a single program.

The 70 categorical and earmarked funds currently in place compose a major part of the state's school finance policy. Other states do not rely as greatly on so many earmarked sources. Perhaps a three-pronged strategy would be most effective:

- Consolidate several programs using the third and fourth options above with funds focused to some extent on schools with high concentrations of disadvantaged children and a common core curriculum.
- Improve the effectiveness of the large programs that cannot easily be consolidated, e.g., special education.
- Improve the evaluation and sunset process by use of more independent evaluators outside the State Department of Education or increase the department's evaluation unit which is independent of program operations.
On this latter point the legislative analyst noted:
We find many of the SDE's evaluations to be of poor quality. The department's sunset review evaluations of categorical programs are of particular concern in this regard. The problem is not that
these evaluations fail to provide definitive answers to questions of program success, but that some provide scarcely any meaningful and useful information at all. Specifically, most of the department's sunset review evaluations fail to:
- articulate the program's goals in measurable terms;
- analyze the degree to which the program achieves its goals;
- diagnose program weaknesses (areas of needed improvement); and
- discuss the policy implications of the findings. Instead, the department's sunset reports typically provide a description of the program (based on legislative and administrative requirements rather than on actual implementation), information regarding the achievement of students in the program (but with no attempt to relate achievement to program participation), and a recommendation that the program be continued and/or expanded. ${ }^{11}$


## PUPIL WEIGHTING AND EXCESS COST APPROACHES

A drastic conceptual change from California's categories would be a transformation to a pupil weighting system such as used by many other states. A pupil weighting system arises from the fact that many students have unusual learning problems that require costly teaching methods. Handicapped pupils, vocational education students, and limited-Englishspeaking students are only a few of these.

Imagine a foundation plan that guarantees a given number of dollars per student. If one wished to spend a different amount on students with special needs, it could be done counting each of them as more than one student. For example, a blind child might be weighted at 1.5 as compared with a 1.0 weighting of so-called normal students.

Ideally, the precise weight represents the ratio of the cost of providing a basic special program to that of providing a basic normal program. The sum of all weights can be obtained, and this weighted student count is used as the basis for calculating state aid to a local district. Pupil weights could be substituted for the major California categoricals, thereby repealing much of the detailed legislation. Such a system, however, provides much less state control of local program decisions.

A major problem with pupil weights is a lack of agreedupon technology for educating each student category. With-
out this technology, it is impossible to agree on the extra cost involved. Attempts to cost out "exemplary programs" nominated by "experts" in such fields as special or bilingual education suffer from criticisms such as (1) there is no reason to believe that a comparable program could not be operated at a reduced cost, (2) there is no assurance that a good program can be equally effective in another district, and (3) the experts disagree on what is "exemplary." It has been difficult to obtain reliable cost data because schools do not have program budgets. Despite these difficulties, 26 states use weighted systems, with Florida having the most elaborate.

An alternative to weighting is state reimbursement for excess costs. This requires districts to account for special program expenditures, deduct state-defined costs of educating normal students, and receive state reimbursement for all or a portion of excess costs. This requires a sophisticated local accounting system in order to substantiate "excess costs." An alternative is for the state to calculate what a service ought to cost and then let the district keep the balance left if they can do it less expensively.

In sum, pupil weighting and excess costs are alternatives that suggest specified types of categorical approaches best suited to certain types of education functions. Excess cost is particularly useful for transportation costs. A categorical approach is well suited to school improvement programs that involve school site councils. Pupil weighting is promising for selected occupational preparation programs.

## SPECIFIC CATEGORICAL PROGRAMS

Each year in Conditions of Education in California, PACE includes an analysis of particular categorical programs that deserve major policy oversight. This year the rapidly growing desegregation program and the state role in staff development are addressed.

## State School Desegregation Assistance

Unlike national patterns of federal court dominance, state courts have been dominant in California. The Crawford case in Los Angeles (filed in 1967 and decided by the California Supreme Court in 1976) is the best known and forms the basis for most of the desegregation efforts now being implemented in California. Currently, school districts in Los Angeles, San Diego, Stockton, San Francisco, San Jose, San Bermardino, Bakersfield, and East Palo Alto either operate or are desegregating under court supervision.

The state's current policy on school desegregation is
contained in Chapter 7, CAC Title 5 (Sections 90-101). The state's regulations follow the Crawford decision of the California Supreme Court that a school district must "take reasonably feasible steps to alleviate the racial and ethnic segregation of its minority students, whatever its origin, because of the educational harm and deprivation it causes such students."

Currentregulations permiteach district todefine segregation for its own purposes, which has resulted in wide variation in the definitions used by various school districts and their consequent need to "desegregate." State regulations basically serve to focus pressure in local communities on local school authorities, since there is no statewide standard for determining either the extent of segregation or appropriate means of alleviating it.

Prior to Proposition 13, school desegregation funding was primarily a local issue. Although the State Board of Education, as early as 1969 , required school districts to "study and consider" ways of desegregating schools, the state's involvement was negligible, and no state funding was appropriated specifically for desegregation purposes. Districts that were under court orders to desegregate were authorized by state law to levy "override" property taxes to pay for their desegregation costs. Districts that were not under court orders either had no racial imbalances to correct or used generalpurpose revenues (from state and local sources) to undertake desegregation efforts.

From 1980-81 through 1984-85, school districts with court-ordered programs were required to submit claims to the state controller for reimbursement. If the amount appropriated in the annual budget act was insufficient, the unpaid claims were submitted to the board for review and possible payment through a claims bill. Since 1983-84, this process was also followed for voluntary desegregation claims. Prior to Chapter 180, Statutes of 1985 (AB 38), it was the administration's practice to budget for desegregation claims based on the last full year's value of paid claims.

Chapter 180 established funding formulas intended to serve as the basis for funding costs prospectively, rather than funding only prior year expenditures. A new base year (198485 audited costs approved by the state controller) was established. Court-ordered desegregation costs are reimbursed at 100 percent of the base year plus 30 percent of the difference between the base year (adjusted for ADA and COLA increases) and current year costs. Reimbursement for courtordered programs, therefore, includes 80 percent of the cost associated with program expansion and other cost increases.

The most common features of California desegregation programs are selective school closures, magnet schools, and
voluntary transfer programs, combined with staff development. Moreover, districts have designated certain predominantly minority schools as being impractical to desegregate. In order to alleviate the harmful consequences of segregation, districts provide extra resources above the level of other district schools. These desegregation programs are similar or identical to compensatory education programs but are provided to children who do not meet the explicit criteria for compensatory education (federal Chapter 1 or state EIA).

The costs for state desegregation have risen rapidly to the point where this is the second largest categorical program (see Figures 6.9 and 6.12 ). Moreover, rapidly rising costs triggered an investigation by a state task force. ${ }^{12}$ They concluded that:

- Court orders lack specificity and often contain general requirements that are difficult to audit (e.g., improve academic excellence and solve the dropout problem). In addition to the difficulty of determining appropriate program components to meet these general requirements, there is no means of determining when the requirement has been fulfilled.
- Many programs implemented as part of a desegregation plan are difficult to distinguish from other "regular" education programs (e.g., bilingual education, costs associated with the alleviation of overcrowding, and deferred maintenance of buildings).
- For court-ordered programs with voluntary components, it is often difficult to distinguish between the two for funding purposes.
- The determination of what costs are in excess of the regular program is difficult for both districts and the state.
- The determination of whether costs are "reasonable" is often impossible, due to the general nature of program goals.
Additionally, district personnel have questioned the appropriateness of state programmatic determinations made as part of the audits. The lack of a state audit appeal process (other than the courts) has compounded all of these problems. At this point, the state has not decided how to solve these problems, but several alternatives are under consideration.


## State Role in Staff Development ${ }^{13}$

California spent nearly $\$ 1$ billion in 1985-86 on staff development for teachers and administrators. The state appropriated nearly $\$ 300$ million for school, district, and univer-sity-administered staff development programs. Nearly $\$ 600$

FIGURE 6.12 K-12 Education Funding for School Desegregation Claims² 1985-86 through 1987-88 (thousands)

| Actual  <br> Program Acrese | Estimated 1986-87 | $\begin{gathered} \hline \text { Estimated } \\ 1987-88 \end{gathered}$ |
| :---: | :---: | :---: |
| A. Court-Ordered Desegregation Claims ...................... $\$ 222,383$ | \$268,955 | \$309,299 |
| Funding .............................................................186.546 ${ }^{\text {b }}$ | $\underline{267,803}$ | $\underline{267,803}$ |
| Deficit ............................................................35,837 | 1,152 | 41,496 |
| Cumulative Deficit ............................................35,837 | 36,989 | 78,485 |
| B. Voluntary Desegregation .......................................... 53,085 | 54,992 | 56,763 |
| Funding ...................................................................7,000 ${ }^{\text {c }}$ | 82.815 | 55.815 |
| Deficit (Surplus) ...............................................46,085 | 27,823 | 948 |
| Cumulative Deficit ............................................46,085 | 18,262 | 19,210 |
| C. Total Claims .............................................................-275,468 | 323,947 | 366,062 |
| Funding ..................................................................193.546 | 350,618 | 323.618 |
| Deficit (Surplus) ......................................................81,922 | $(26,671)$ | 42,444 |
| Cumulative Deficit ..............................................81,922 | 55,251 | 97,695 |

2 This table shows funding for claims by fiscal year. It does not show expenditurs by fiscal year, which are different, due to carryovers.
b Excludes $\$ 22$ million appropriated by AB 38 (Ch 180/85) for payment of prior year claims.
c Excludes $\$ 73.4$ million appropriated by AB 38 (Ch 180/85) for payment of prior year claims.

SOURCE: Legislative Analyst, 1987.
million was in the form of future salary obligations to teachers who participated in staff development activities and earned units toward advancement on the salary schedule.

Of the total staff development expenditures, the state targeted more than $\$ 84$ million in categorical money for staff development programs in 1985-86. These programs can be divided into five categories, with each category representing a different locus of investment: (1) teachers, (2) school-based programs, (3) district-level programs, (4) regional programs, and (5) centrally located services.

As can be seen from Figure 6.13, the state's largest targeted staff development investment in 1985-86 was in two programs which placed money directly in the hands of teachers: the Mentor Teacher Program and the Classroom Teacher Instructional Improvement Program (CTIIP). State appropriations for these programs totaled $\$ 62.75$ million. The next most substantial state investment was for regional programs. The lion's share of this money ( $\$ 10.6$ million) was allocated to the Teacher Education and Computer Centers (TECCs).

An additional $\$ 34$ million in state categorical funds was appropriated to staff development in 1985-86 from other state programs that included staff development components. Included in this category were vocational education, compensatory education, and dropout prevention programs. Two-thirds of this state staff development money ( $\$ 22.5$ million) was
allocated to the School Improvement Program (SIP) for school-based professional development.

In his budget veto message last year, Governor Deukmejian eliminated money from various staff development categories. More than $\$ 3.5$ million was eliminated from school-site staff development programs and more than $\$ 100,000$ from Regional Science Resource Centers. All funds were eliminated for the Teacher Education Computer Centers (TECC) as well as for Classroom Teacher Instructional Improvement grants (CTIIP). In his proposed budget for 198889 , the governor earmarked $\$ 10$ million for staff development, pending release of the results of a comprehensive review of professional development programs throughout the state being conducted for the California Postsecondary Education Commission by PACE and Far West Laboratory for Educational Research.

The PACE/Far West study examined the array of staff development offerings in 32 California school districts. For purposes of the study, staff development was defined as:
... any activity that is intended partly or primarily to prepare paid staff members for improved performance in present or future roles in the school district. . . . The term staff member is limited in scope [to include] all certificated personnel and teachers' aides.

FIGURE 6.13 State Categorical Staff Development Funds

| Locus of Investment | State Fund Targeted for Staff Development (millions) | Other State Programs with Staff Development (millions) |
| :---: | :---: | :---: |
| Investment Directly in Teachers |  |  |
| Mentor Teacher Program | \$45.75 |  |
| CTIIP | 17.00 |  |
| Investment in School-Based Staff Development |  |  |
| AB 551 | 3.65 |  |
| Investment in District-Level Staff Development |  |  |
| School Improvement Program (SIP) |  | \$22.50 |
| AB 803 |  | 3.00 |
| State Compensatory Education |  | 4.60 |
| Vocational Education |  | 3.50 |
| SB 65 Dropout Prevention |  | 0.50 |
| Math/Science Teacher | 0.12 |  |
| Investment in Regional Staff Development |  |  |
| Teacher Education Computer Centers (TECC) | 10.60 |  |
| California School Leadership Academy and Administrator Training Centers (ATC) |  | 4.20 |
| Instructional Materials | 0.15 |  |
| Bilingual Teacher Training | 0.83 |  |
| Investment in Centrally Located Services |  |  |
| Software Clearninghouse | 0.14 |  |
| Curriculum Implementation Centers (CIC) | 1.70 |  |

SOURCE: Judith Warren Little, et al., Staff Development in California: Public and Personal Investments, Program Patterns, and Policy Choices (Berkeley and San Francisco, CA: Policy Analysis for Califormia Education, PACE, and Far West Laboratory for Educational Research and Development, December 1987).

The overarching goal of staff development is to improve instruction to students. To accomplish this goal, the general purposes of staff development include broadening and deepening teachers' content knowledge and pedagogical skills, expanding schools' organizational capacity to improve, and helping to prepare teachers for expanded professional roles.

Staff development programs are offered by four different types of providers: individual schools, local school districts, regional and county offices, and professional associations. Districts and schools are the major providers of staff development. More than half of state-appropriated staff development funds in 1985-86 were disbursed to local school districts as part of district-administered activities.

The PACE/Far West study found that the content and form of local staff development activities are beginning to reflect the era of education reform generally and California's own omnibus reform legislation, SB 813, particularly. Many of the school districts that participated in the study keyed their staff development offerings to the state's new model curriculum standards and to results of the school improvement research. However, most district staff development programs still reflect the "menu approach," offering a wide array of generic courses, such as classroom management and clinical teaching, rather than content-specific courses geared to schools' increasingly demanding academic curriculum.

Although previous research suggests the promise of school-level professional development programs, the PACE/ Far West study found that most school districts centralize staff development planning and activities. Nearly two-thirds ( $64 \%$ ) of the time spent in district-sponsored staff development activities involved teachers from more than one school. More than 80 percent of staff development is aligned with two major district-level functions, either curriculum and instruction or the administration of specific categorical programs.

More than half of district staff development costs were in "leader time" for teachers and administrators who plan and conduct professional development activities. District administrators absorbed the largest share of leader time. In a teacher survey conducted as part of the PACE/Far West study, fourfifths of teachers said they believe teachers should provide staff development. Yet, teachers generally participate in professional development activities as leamers, not leaders. Teachers as staff development leaders constituted less than 10 percent of staff development leader time. An exception to this statistic was revealed in an examination of mentor teachers. Two-thirds of all mentors reported they had led staff development activities.

Approximately 20 percent of staff development money
was appropriated in 1985-86 for regional service providers. These service centers provided assistance to individual school districts and administered statewide programs, the largest of which were the Teacher Education and Computer Centers (TECCs) and the California School Leadership Academy's Administrative Training Centers (ATCs).

Less than three percent of staff development funds were disbursed to university-based categorical programs. The University of California system conducts 19 such programs, imcluding the Califomia Writing, Mathematics, Literature, and Humanities projects, and the EQUALS math program. The California State University system administers 64 staff development programs, including inservice courses for teachers and adminisitrators and a New Teacher Retention Program.

A major finding of the PACE/Far West staff development study is that at both state and local levels, there is little evidence of a coordinated concept of the possibilities of staff development to influence teaching. At the local level, researchers could uncover no comprehensive set of "beliefs" which undergird staff development programs. Most districtlevel staff development programs remain tied to the regulations governing individual categorical programs. At the state level, this uncoordinated notion of staff development takes shape as the absence of a policy orientation toward professional improvement for teachers and administrators. Added to this confused policy mix is general uncertainty about the appropriate roles of county offices of education and institutions of higher education as providers of continuing education for California's certificated staff.

Another finding of the PACE/Far West study is that, while school districts are becoming increasingly sophisticated about staff development offerings, the current arrangement of staff development programs in most districts is unlikely to yield substantial changes in teachers or teaching. The study suggests that the purposes of professional development would be better served if staff development programs were organized differently, for example:

- There is a need to reconceive the locus of control of staff development. The school, as the center of learning, should be the primary decision unit to build the strategic plan for staff development.
- A remarkably wide range of staff development providers is available. Schools and districts should select service providers on the basis of the providers' particular knowledge and expertise. Some professional development courses are best organized by local teachers, some by district personnel or regional
service providers, others by colleges or universities.
- Consideration should be given to the timing of and incentives for staff development. Teachers report that access to new ideas is their prime motivator for participating in staff development. Yet the demands on teacher time during the salaried work day and work year often mitigate against teachers having sufficient time to remain professionally current. In addition, the state and individual school districts should consider a portfolio of incentives, both internal and external, to encourage additional teacher participation in staff development programs.
- An evaluation should be undertaken of the programs to which staff development money is committed. As part of California's overall education budget, staff development represents a modest investment, only about 1.8 percent. However, in 1985-86, one half of the state's staff development allocation was consumed by two programs: the Classroom Teacher Instructional Improvement Program (CTIIP) and the Mentor Teacher Program. Put another way, less than 10 percent of the state's teachers received 50 percent of the state's targeted staff development resources. CTIIP was vetoed by the governor last year. The Mentor Teacher Program has never been formally reviewed.
- A feedback loop should be developed to assess the effectiveness of staff development programs. Such an evaluation mechanism could both provide a costbenefit analysis of activities which are completed as well as assist in planning future staff development offerings.


## 1987-88 STATE CATEGORICAL AID PROGRAMS (\$10 MILLION+)

## Program: Special Education

Intent of Funding: Includes support for (1) the Master Plan for Special Education, (2) state administration, (3) the state special schools for the deaf and blind, and (4) the Southwest Regional Deaf-Blind Center.
Source of Funding: General Funds
Funds Appropriated Last Two Years:

$$
\begin{array}{ll}
1986-87 & \$ 1,021,412,000 \\
1987-88 & \$ 1,103,149,000
\end{array}
$$

## Program: State Teachers Retirement System

Intent of Funding: Toprovide (1) an annual contribution to the State Teachers' Retirement Fund (STRF) to reduce the unfunded liability of the State Teachers' Retirement System; (2) funds for supplemental cost-of-living adjustments to the State Teachers' Retirement System retirees.
Source of Funding: General Funds
Funds Appropriated Last Two Years:
1986-87
1987-88
\$507,385,000

## Program: Racial Desegregation

Intent of Program: Reimbursement to school districts for the cost of court-ordered as well as voluntary school racial desegregation programs.
Source of Funding: General Fund
Funds Appropriated Last Two Years:
1986-87
\$350,618,000
(Court-Ordered- $\$ 267,803,000$;
Voluntary- $\$ 82,815,000$ )
1987-88
\$362,784,000
(Court-Ordered-\$315,551,000;
Voluntary-\$47,233,000)

## Program: Child Care

Intent of Funding: Intended to (1) enhance the physical, emotional, and developmental growth of participating children, (2) assist families to become self-sufficient by enabling parents to work or receive employment training, and (3) refer families in need of medical or family support services to appropriate agencies.
Source of Funding: General Fund
Funds Appropriated Last Two Years:

| $1986-87$ | $\$ 319,830,000$ |
| :--- | :--- |
| $1987-88$ | $\$ 315,447,000$ |

## Program: Transportation (including Special Education)

 Intent of Funding: The home-to-school transportation program provides state reimbursement for the approved transportation costs of local school districts and county superintendents of schools, up to a specified amount. The program also funds transportation to and from related student services required by the individualized education programs of special education pupils. The state also provides assistance to small school districts for bus replacement.Source of Funding: General Fund
Funds Appropriated Last Two Years:

1986-87
1987-88
\$288,797,000
\$289,970,000

## Program: Adult Education

Intent of Funding: The Office of Adult, Alternative, and Continuation Education Services is responsible for managing (1) state- and federally funded school district programs for adults and (2) general education development (GED) testing. The appropriation for adult education local assistance to. school districts includes adults in correctional facilities. The funds are also for the purpose of providing additional adult education courses in English as a Second Language (ESL). Source of Funding: General Fund Funds Appropriated Last Two Years:

| $1986-87$ | $\$ 216,823,000$ |
| :--- | :--- |
| $1987-88$ | $\$ 239,488,000$ |

Program: School Improvement Program (Sunsetted July 24, 1987, although funded for 1987-88.)
Intent of Funding: Encourage a continuing process aimed at improving instruction, services, school environment, and organization at school sites. School Improvement Programs involve parents, older students, and other members of the community in the improvement process through the creation of a school site council. The school site council develops, monitors, and modifies (as needed) a school improvement plan with specified components that address the needs of the school. Funding is provided to allow the council some discretionary resources which may be used to meet supplementary needs of the school and implement the plan.
Source of Funding: General Fund/State School Fund Funds Appropriated Last Two Years:

$$
\begin{array}{ll}
1986-87 & \$ 224,865,000 \\
1987-88 & \$ 229,752,000
\end{array}
$$

## Prosram: Resional Occupational Centers and Programs (ROC/Ps)

Intent of Funding: To provide support for vocational training to high school students and adults in the 68 (1986-87 figure) ROC/Ps in the state.
Source of Funding: General Fund
Funds Appropriated Last Two Years:
1986-87 \$209,481,000
1987-88 \$212,059,000

Program: Economic Impact Aid (Sunsetted July 1987, but funded for 1987-88.)
Intent of Funding: To support compensatory education services to educationally disadvantaged students (low-achieving pupils in economically disadvantaged areas) and to support bilingual education services to limited-English-proficient (LEP) students. Economic Impact Aid is a kind of "block grant" that provides funding to school districts for both programs.
Source of Funding: General Fund/State School Fund Funds Appropriated Last Two Years:

| $1986-87$ | $\$ 196,952,000$ |
| :--- | :--- |
| $1987-88$ | $\$ 196,952,000$ |

## Program: Instructional Materials

Intent of Funding: Provision of textbooks for public school students, grades K-12.
Source of Funding: General Fund Funds Appropriated Last Two Years:

| $1986-87$ | $\$ 92,605,000$ |
| :--- | :--- |
| $1987-88$ | $\$ 97,499,000$ |

## Program: Urban Impact Aid

Intent of Funding: To provide additional funding to urban school districts that incur greater expenses than nonurban districts because of their greater enrollment of disadvantaged pupils.
Source of Funding: General Fund/State School Fund Funds Appropriated Last Two Years:

| $1986-87$ | $\$ 76,200,000$ |
| :--- | :--- |
| $1987-88$ | $\$ 86,635,000$ |

## Program: Child Nutrition

Intent of Funding: Includes (1) mini-grants to school districts and child care agencies to implement nutrition education programs and nutrition education for food service personnel, (2) a basic subsidy for each meal served by public schools, private not-for-profit schools, and child care centers to pupils from low-income households eligible for free and "reducedprice" meals, (3) a fixed-rate reimbursement to participating school food authorities for daily nutrition supplements served to pregnant or lactating students, (4) reimbursement to participating schools for nutrition supplements to pregnant and lactating minors.
Source of Funding: General Funds
Funds Appropriated Last Two Years:

| $1986-87$ | $\$ 40,112,000$ |
| :--- | :--- |
| $1987-88$ | $\$ 40,113,000$ |

## Program: Mentor Teachers

Intent of Funding: The Mentor Teacher Program has two major objectives: (1) to provide exemplary teachers with recognition and a $\$ 4,000$ per year stipend as an incentive for them to continue teaching in the classroom and (2) to employ the skills of these exemplary teachers to train, supervise, and inspire other teachers. After nomination by a local selection committee, the district governing board may designate a classroom teacher as a mentor for a period not to exceed three consecutive school years. Upon completion of the three years as a mentor an individual may be reviewed, renominated, and reappointed.
Source of Funding: General Fund/State School Fund Funds Appropriated Last Two Years:

$$
\begin{array}{ll}
1986-87 & \$ 45,750,000 \\
1987-88 & \$ 45,750,000
\end{array}
$$

## Program: Gifted and Talented Education

Intent of Funding: For unique education opportunities for high-achieving and under-achieving gifted and talented students, including those in the upper range of intellectual ability, while ensuring the participation of children from disadvantaged and varying cultural backgrounds.
Source of Funding: General Fund
Funds Appropriated Last Two Years:

| $1986-87$ | $\$ 21,236,000$ |
| :--- | :--- |
| $1987-88$ | $\$ 22,510,000$ |

## Program: Driver Training

Intent of Funding: For driver education through both a laboratory component (behind-the-wheel training) and a classroom component. School districts may also receive reimbursement for the cost of replacing vehicles and simulators that are used exclusively in the laboratory phase of the program.
Source of Funding: General Fund
Funds Appropriated Last Two Years:

$$
\begin{array}{ll}
1986-87 & \$ 19,500,000 \\
1987-88 & \$ 20,136,000
\end{array}
$$

## Program: Small District Transportation

Intent of Funding: Provides additional general state aid to school districts that (1) had fewer than 2,501 units of ADA in 1978-79 and (2) incurred transportation costs equal to more than three percent of their total local general fund education expenses in 1977-78. There is no requirement, however, that this aid be spent on transportation, and it may be used for a variety of other purposes. Fifty-four percent of all districts
(552) receive this aid.

Source of Funding: General Fund Level of Funding Last Two Years:

$$
\begin{array}{ll}
1986-87 & \$ 10,000,000 \\
1987-88 & \$ 10,000,000
\end{array}
$$

Program: Miller-Unruh Reading (Sunsetted, but funded at same level for 1987-88.)
Intent of Funding: To upgrade the reading achievement of low-performing K-6 students by funding reading specialists for participating schools.
Source of Funding: General Fund
Level of Funding Last Two Years:

| $1986-87$ | $\$ 19,869,000$ |
| :--- | :--- |
| $1987-88$ | $\$ 19,869,000$ |

## Program: Year Round Incentives

Intent of Funding: School districts that accommodate overcrowding through the use of year-round schools may be entitled to receive incentive funds, additional general purpose aid which may be spent for any prupose. Districts remain "in line" for state school construction aid.
Source of Funding: State School Building Lease/Purchase Fund
Level of Funding Last Two Years:

| $1986-87$ | $\$ 3,639,000$ |
| :--- | ---: |
| $1987-88$ | $\$ 15,000,000$ |

Program: Educational Technology Local Assistance Program
Intent of Funding: To provide statewide coordination and support to strengthen technological skills of students and thereby better prepare them for employment.
Source of Funding: General Fund
Level of Funding Last Two Years:

| $1986-87$ | $\$ 26,155,000$ |
| :--- | :--- |
| $1987-88$ | $\$ 13,055,000$ |

## Program: Dropouts/High Risk Youth

Intent of Funding: Establishes three types of programs in order to help school districts reduce the number of students dropping out of school and deliver services to students who have already dropped out. These programs are (1) the SchoolBased Pupil Motivation and Maintenance Program, (2) alternative education and work centers, and (3) education clinics. In addition, SB 65 authorized the superintendent of public instruction to (1) provide grants to districts wishing to replicate existing model programs and (2) establish an information
clearinghouse on effective dropout prevention practices.
Source of Funding: General Fund
Level of Funding Last Two Years:

$$
\begin{array}{ll}
1986-87 & \$ 13,650,000 \\
1987-88 & \$ 12,500,000
\end{array}
$$

${ }^{1}$ Academic Senates, 1984.
${ }^{2} \mathrm{~A}$ form of remediation.
${ }^{3}$ California State Department of Education, Performance Report for California Schools 1987 (Sacramento, CA: State Department of Education, 1987, 6).
${ }^{4}$ For a summary see Richard N. Apling and Christine Padilla, "Funds Allocation and Expenditures Under the Education Block Grant," Educational Evaluation and Policy Analysis, 8 (4), 393-402.
${ }^{5}$ Eric Hartwig, Do "Our Schools Win, Too"? School Uses of Lottery Revenues: Year One (Berkeley, CA: University of California, Policy Analysis for California Education, April 1987).
${ }^{6}$ See U.S. Department of Education, Preliminary Findings of the National Assessment of Chapter 1, March 1987, a report prepared for Congress.
${ }^{7}$ Michael W. Kirst, "The Federal Role and Chapter 1," Stanford University School of Education, CERAS 87-3, 1986.
${ }^{8}$ See Allan R. Odden, Education Reform and Services to Poor Students: Can the Two Policies Be Compatible (Berkeley, CA: University of California, Policy Analysis for California Education, March 1987).
${ }^{9}$ David Pacheco and Peter Birdsall, Seeking Flexibility in School Management (Berkeley, CA: University of California, Policy Analysis for California Education, November 1985).
${ }^{10}$ See James W. Guthrie and Michael W. Kirst (eds.), Data Based Accountability in Education (Berkeley, CA: University of California, Policy Analysis for California Education, June 1984, particularly the article by Walter Garms entitled, "Merit Schools for Florida.")
${ }^{11}$ California Legislative Analyst, Budget Analysis, 1987-88, p.167.
${ }^{12}$ California State Department of Finance, Report to the Legislature of the Desegregation Cost Review Committee, March 1987.
${ }^{13}$ Judith Warren Little, William Gerritz, David Stern, James W. Guthrie, Michael W. Kirst, and David Marsh, Staff Development in California: Public and Personal Investments, Program Patterns, and Policy Choices (Berkeley, CA: University of Califomia, Policy Analysis for California Education and Far West Regional Laboratory for Educational Research, December 1987).

## chapter 7

## Student Performance

## Achievement score trends

California's school enrollments are the largest of any state in the nation. Almost one out of every nine school children resides in California. Such large numbers are themselves a major influence upon national averages. Thus, it is not surprising that the long-term trend in achievement test scores for California students has largely mirrored that of students throughout the nation: a major decline, beginning in the early to mid 1960s and extending over a 10 to 15 year period, has been followed by a steady rise which began in the mid 1970s. This trend has been remarkably widespread though not entirely uniform across all grades and subject matters.

Figure 7.1 shows average California Assessment Program (CAP) scores for grades $3,6,8$, and 12 from 1979-80 to 1986-87. For grades 3 and 6 (see Figures 7.2 and 7.3) there have been consistent and, when taken cumulatively, substantial increases in all of the three tested subject matter areasreading, written language, and mathematics. This year, however, 3rd grade increases in all three subject matter areas slowed totwo points from a pattern over the previous six years which had ranged between four and seven points. This year in grade 6 there was no gain in any of the three subject matter areas.

The 8 th grade test has been used only since 1983-84 so the trend here is less clear.

The long-term pattern for the 12 th grade has been essentially flat, but in contrast to this year's apparent leveling in grades 3 and 6,12 th graders made their largest year-to-year gains since the testing program began (see Figure 7.4). The 2.6 average score point gain in math resulted in an additional 17,500 seniors scoring in the 1983-84 top quartile, an increase from 25 to 32 percent of students taking the test.

[^2]
## HIGHLIGHTS

- The academic achievement of California's elementary students has been improving for more than a decade, and has done so marginally again in 1987. The long trend of annual increases may be leveling off, however.
- By contrast, in the 12 th grade the long-term pattern of small up and down changes gave way in 1987-88 to an approximate one percent increase in all subjects tested-the largest one year gain in Califormia student achievement on record.
- In grades 3 and 6 , California students now score above the national average, whereas in grades 8 and 12 they generally score at or below it.
- There has been an appreciable increase in the percentage of California high school graduates taking the Scholastic Aptitude Test (SAT) (up from 38 percent in 1982-83 to 46 percent in 86-87). A1though this usually means a larger proportion of academically less able pupils in the test-taking population, and predictably would be expected to produce a decline in the overall average, scores on both the verbal and math portions of the SAT actually inched up a point to 424 and 482 , respectively. Nationally, verbal scores dropped a point to 430, and math scores went up one point to 476. Thus, Califomia students remain slightly below the national average on the verbal part of the test and slightly above it in math.
- On the College Board Achievement Tests, California's scores increased slightly, but so did scores across the nation, with the result that California's longstanding and substantial deficit in English, math, history, biology, chemistry, phys-ics-and most other areas-remained unchanged.
- California's ethnic and language minority students have been increasing their achievement at a faster rate than white students. However, despite these


## continued

FIGURE 7.1 Average CAP Scores by Grade Level and Content Area, and Difference in Scores by Year, 1979-80 through 1986-87

| Grade level and content area |  | Average test score, by year |  |  |  |  | Year to Year Change |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  | 79-80 | 80-81 | 81-82 | 82-83 | 83-84 | 84-85 | 85-86 |
|  |  |  |  |  |  |  |  |  | to | to | to | to | $t 0$ | to | to |
|  | 79-80 | 80-81 | 81-82 | 82-83 | 83-84 | 84-85 | 85-86 | 86-87 | 80-81 | 81-82 | 82-83 | 83-84 | 84-85 | 85-86 | 86-87 |
| Grade 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reading | 250 | 254 | 258 | 263 | 268 | 274 | 280 | 282 | +4 | +4 | +5 | +5 | +6 | +6 | +2 |
| Written Language | 250 | 255 | 260 | 266 | 272 | 279 | 285 | 287 | +5 | +5 | +6 | +6 | +7 | +6 | +2 |
| Mathematics | 250 | 254 | 261 | 267 | 274 | 278 | 283 | 285 | +4 | +7 | +6 | +7 | +4 | +5 | +2 |
| Grade 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reading | 250 | 252 | 254 | 253 | 249 | 253 | 260 | 260 | +2 | +2 | -1 | -4 | +4 | +7 | 0 |
| Written Language | 250 | 253 | 257 | 259 | 260 | 265 | 271 | 271 | +3 | +4 | +2 | +1 | +5 | +6 | 0 |
| Mathematics | 250 | 253 | 258 | 260 | 261 | 264 | 268 | 268 | +3 | +5 | +2 | +1 | +3 | +4 | 0 |
| Grade 8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reading | - | - | - | -- | 250 | 240 | 243 | 247 | - | - | - | - | -10 | +3 | +4 |
| Written Language | - | - | -- | - | 250 | 246 | 248 | 254 | - | - | - | - | -4 | +2 | +6 |
| Mathematics | - | - | -- | - | 250 | 251 | 253 | 259 | - | - | - | - | +1 | +2 | +6 |
| History-Social Science | - | - | -- | -- | - | 250 | 243 | 247 | - | - | - | - | - | -7 | +4 |
| Science | - | -- | -- | -- | - | -- | 250 | 256 |  |  |  |  |  | - | +6 |
| Grade 12 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reading | 63.1 | 63.4 | 63.2 | 63.1 | 62.2 | 62.9 | 62.7 | 63.6 | +0.3 | -0.2 | -0.1 | -0.9 | +0.7 | -0.2 | +0.9 |
| Written Language | 62.4 | 63.1 | 63.2 | 63.0 | 62.6 | 63.2 | 63.4 | 64.1 | +0.7 | +0.1 | -0.2 | -0.4 | +0.6 | -0.2 | +0.7 |
| Spelling | 68.8 | 69.0 | 69.5 | 69.5 | 69.4 | 69.7 | 70.1 | 70.6 | +0.2 | +0.5 | 0 | -0.1 | +0.3 | -0.4 | +0.5 |
| Mathematics | 66.8 | 68.0 | 67.7 | 67.7 | 67.4 | 68.3 | 68.7 | 70.0 | +1.2 | -0.3 | 0 | -0.3 | +0.9 | -0.4 | +1.3 |

Note: The scores for grades three, six, and eight are reported in scaled score units. These scores range from approximately 100 to 400 , with a statewide average of 250 . The base year for grades three and six was 1980. The grade eight test was first administered in 1983-84. History-social science was added to the grade eight test in 1984-85. The scores for grade twelve continue to represent the percentage of questions answered correctly.

SOURCE: California State Deparment of Education.
relative gains, the gap between minority and majority students remains large. Blacks and Hispanics are still scoring 20 to 30 percent lower than whites. Asian students are nearer to closing the gap, and indeed in mathematics they have moved ahead of white students.

* Students who watch moretelevision score lower on all parts of California Assessment Program tests. Students report that, on average, they watch between two
and three hours of TV a day, and this has not changed significantly since 1979 .
- The amount of time students say they spend on homework is positively related to their achievement scores. Students reported significant increases in the amount of time they spent doing homework between 1979 and 1984, but since 1985 the reported average time of approximately an hour-and-a-half daily has not changed.

FIGURE 7.2 Reading, Writing, and Math Scores for Grade 3, 1979-80 through 1986-87


SOURCE: California State Department of Education.

FIGURE 7.3 Reading, Writing, and Math CAP Scores for Grade 6, 1979-80 through 1986-87


SOURCE: California State Department of Education.

Several things can be said about the educational meaning of these achievement score changes. One can be fairly confident that where increases are indicated they are real. This is so for two reasons. First, unlike many other standardized tests which are composed of a small number of items and whose security is much more vulnerable, the California Assessment Program (CAP) test is a "matrix sample" type of test in which each subject area is tested by a large number of items, only a small proportion of which an individual student takes, and the selection of test questions therefore varies for individuals within the same classroom. While this system does not allow the development of individual pupil scores, it provides a highly reliable and robust measure of the subject matter in question and is resistant to cheating and direct teaching to the items in the test.

Second, during the extended period over which the scores in grades 3 and 6 -and to a much lesser degree in grades 8 and 12-have been increasing, the proportion of students in the test-taking population who come from educationally disadvantaged backgrounds-as represented by the percentage of ethnic minorities and those who have limited proficiency in English-has also been increasing. Other things equal, this would cause the average test scores to decline, but since the opposite has been happening in most grades and subjects, it seems clear that there has been an actual increase in students' knowledge and problem-solving abilities.

How much this actual increase is due to improvements in the educational experiences students are receiving in school versus their family and out-of-school experiences is difficult to say. However, it is not likely due to any decrease in the difficulty of the tests.

FIGURE 7.4 Reading, Writing, and Math CAP Scores for Grade 12, 1979-80 through 1986-87


SOURCE: California State Department of Education.

## NATIONAL NORMS

The data presented in Figure 7.1 describe the trend on academic achievement for California students as measured by the state's own test, the California Assessment Program, but do not indicate how California's students rank nationwide. However, CAP scores have been statistically equated with scores of several other nationally normed tests, and the data from these studies are presented in Figures 7.5 through 7.8.

These "norming" studies suggest that, consistently across the several tests, California's 3rd and 6th graders have steadily improved their relative standing since the mid 1970s and are now performing above the national average. However, the 8th and 12th graders are scoring at or below it. For all grades, the trend is one of relative improvement, i.e., California's students are slowly catching up to the national average, or in the case of the 3rd and 6th graders, moving further above it.

## COLLEGE ADMISSION TESTS

A similar pattern of prolonged and substantial decline followed by a period of rising scores has also characterized the Scholastic Aptitude Test (SAT) both nationally and in California.

Figures 7.9 through 7.11 present verbal and math SAT scores for Califormia and the nation from 1971-72 through 1986-87. The pattern is somewhat different here from the elementary and secondary achievement scores in that the decline persisted until 1980 and has been followed by a smaller and more hesitant increase which, assuming it continues, must improve further before both national and California average scores reach their highs of the mid 1960s.

Since 1985-86, the national average went down one point on the verbal and up one point on the math portions of the test, whereas in California there was an increase of one point on both portions of the test.

The SAT itself is an aptitude not an achievement test. This means that it is designed to measure general abilities that are known to be related to academic success in the first year of college, rather than specific academic subject matter content. While the abilities measured by the SAT are the result of students' total educational experiences-in school and out of school-ability tests are, for that reason, an imprecise measure of the subject area knowledge that comes more directly
from instruction in the school curriculum. Such content knowledge is better indicated by the College Board Achievement Tests which some colleges require for admission or placement. These "achievement" scores reflect the performance of a subportion of the already selected part of the student population who are college bound.

Keeping all this in mind, comparisons of this subgroup of California students with comparable students nationwide are reflected by data presented in Figure 7.12. Comparing these data with those presented earlier pertaining to elementary and secondary achievement scores and SAT scores, it is clear that California college-bound students are further below the national average in their knowledge of the broad span of academic content measured by the Achievement Tests.

Figures 7.13 and 7.14 show that the relative deficit of this group of California high school students compared to similar students throughout the nation has been increasing over the years, and the new scores for 1987 do not indicate that any reversal of this trend is at hand.

In assessing the differences between California and the nation on both the SAT and the Achievement Test scores, it should be kept in mind that the national average is constituted in a manner that puts California at a slight disadvantage. This is so because the national average is made up of the scores of students from all states, even though almost half the states are not "SAT states," i.e., these states predominantly use the American College Test (ACT) rather than the SAT, which in turn means that those taking the SAT from that set of states are usually a highly select group of students applying to highly selective out-of-state colleges. A fairer analysis would be to compare California with only the other SAT states. The data necessary to make this analysis were not available at the time that this report was prepared, but if such an analysis were made, it would probably have the result of bringing California closer to the national verbal average and still further above it in math. The same effect would occur with the College Board Achievement scores, i.e., the substantial disparities between California and the revised national averages would probably be reduced somewhat.

Looking only at the trend in California scores, it is also important to note that recent increases have been registered even though the proportion of high school graduates taking the SAT has increased substantially, a circumstance which, as noted above, would by itself normally be expected to result in a decrease in the average score.

## GRADE THREE



- The Reading. TesI was first administered in 1973.74. The percentile ranks are based on an equating study of the Reading Test and the Cooperative Primary Reading Test Forms 23A and 23B, normed in 1966.
** The revised Reading Test was administered to all California students in 1974-75, 1975-76, 1976-77, 1977-78, and 1978-79. The percentile ranks are based on equating studies of the revised Reading Test and the Comprehensive Tests of Basic Skills, Form S, normed in 1973.
**. The new Survey of Basic Skills; Grade 3 was administered to all California students in 1979-80 through 1984-85. The estimated national percentile ranks are based on an equating study of the new test and the Comprebensive Tesls of Basic Skills, Form S, normed in 1973. For 1981-82 through 1984-85, the percentile ranks are also given for the 1981 edition of the CTBS and the 1982 edition of the Stanford Achievement Test.

- The new California test, the Suryey of Basic Skills: Gride 6 , was first administered to all California pupils in 1974-75. The percentile ranks are based on an equating of the Suryey of Basic Skills and the Comprehensive Tests of Basic Skills (CTBS), Form Q, which wes normed in 1968.
** The revised version of the Survey of Basic Skilk; Grade 6 was administered from 1975-76 through 1980-81. A second version of the test was first administered in 1981-82. The percentile ranks, since 1974, are based on equating of the Surrey of Basic. Skills to three editions (1968, 1973, 1981) of the Comprehensive Tests of Basic Skills (CTBS) and the latest edition (1982) of the Stanford Achieyement Test.

SOURCE: California State Department of Education.

FIGURE 7.7 Estimated National Percentile Ranks of Median California Student Performance, 1984-85

## GRADE EIGHT

| Content area/ <br> test and norms | $83-84$ | Estimated norm |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Reading -CTBS, 1981 | 39 | 34 | $35-86$ | $86-87$ |
| Written expression - CTBS, 1981 | 50 | 49 | 49 | 38 |
| Mathematics -CTBS, 1981 | 48 | 48 | 49 | 51 |

NOTE: The Survey of Academic Skills: Grade 8 was first administered in 1983-84. The estimated national norms are based on an equating study of the new test and the latest edition of the Comprehensive Tests of Basic Skills, Form U, normed in 1981.

SOURCE: California State Department of Education.

FIGURE 7.8 on following page.

FIGURE 7.9 Scholastic Aptitude Test (SAT) Scores for California and the Nation, 1971-72 through 1986-87

| Year |  | National |  | California |
| :---: | :--- | :---: | :--- | :---: |
|  | Verbal | Math | Verbal | Math |
| $1971-72$ | $\cdots \cdots$ | $\cdots \cdots$ | $\cdots$ |  |
| $1972-73$ |  | $\cdots \cdots$ |  |  |
| $1973-74$ | 452 | 485 | 464 | 493 |
| $1974-75$ | 444 | 481 | 452 | 485 |
| $1975-76$ | 434 | 480 | 450 | 484 |
| $1976-77$ | 431 | 472 | 435 | 473 |
| $1977-78$ | 429 | 472 | 430 | 470 |
| $1978-79$ | 429 | 468 | 427 | 470 |
| $1979-80$ | 427 | 468 | 427 | 466 |
| $1980-81$ | 424 | 467 | 428 | 473 |
| $1981-82$ | 424 | 466 | 424 | 472 |
| $1982-83$ | 426 | 466 | 426 | 475 |
| $1983-84$ | 425 | 467 | 425 | 474 |
| $1984-85$ | 426 | 468 | 421 | 474 |
| $1985-86$ | 431 | 471 | 421 | 476 |
| $1986-87$ | 431 | 475 | 424 | 480 |
|  |  | 475 | 423 | 481 |

SOURCE: College Board.

FIGURE 7.8 Estimated National Percentile Ranks of Median California Studeat Performance, 1969.70 through 1986-87


FIGURE 7.10 Scholastic Aptitude Verbal Test Scores (SAT-V) for California and the Nation, 1971-72 through 1986-87


SOURCE: College Board.

FIGURE 7.11 Scholastic Aptitude Math Test Scores (SAT-M) for California and the Nation, 1971-72 through 1986-87


SOURCE: College Board.

FIGURE 7.12 1987 Average College Board Achievement Scores for California and the Nation

| Subject Area | Mean California <br> Score | Mean National <br> Score | Difference <br> (US - Calif) | No. of California <br> Test Takers |
| :--- | :---: | :---: | :---: | :---: |
| English Composition | 496 | 524 | -28 |  |
| Mathematics I | 525 | 548 | -23 | 43,038 |
| American History | 510 | 529 | -19 | 35,331 |
| Mathematics II | 646 | 662 | -16 | 14,758 |
| Spanish | 545 | 536 | 9 | 11,100 |
| Biology | 518 | 550 | -32 | 7,741 |
| Literature | 502 | 528 | -26 | 7,008 |
| Chemistry | 555 | 574 | -19 | 8,344 |
| French | 527 | 545 | -18 | 5,056 |
| Physics | 575 | 597 | -22 | 3,380 |
| German | 577 | 574 | 3 | 2,312 |
| European History | 522 | 547 | -22 | 553 |
| Latin | 572 | 561 | 11 | 534 |
| Hebrew | 671 | 618 | 53 | 190 |
|  |  |  |  | 54 |

SOURCE: College Board.

FIGURE 7.13 Differences Between National and California College Board Achievement Scores, 1981-87

| Subject Area | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| English Composition | -17 | -21 | -21 | -26 | -29 | -26 | -28 |
| Mathematics I | -20 | -23 | -22 | -25 | -25 | -23 | -23 |
| American History | -21 | -22 | -19 | -20 | -19 | -19 | -19 |
| Mathematics II | -3 | -6 | -9 | -12 | -15 | -14 | -16 |
| Spanish | -12 | -11 | -1 | -2 | 4 | 8 | 9 |
| Biology | -11 | -7 | -26 | -31 | -41 | -34 | -32 |
| Literature | -34 | -36 | -21 | -25 | -28 | -28 | -26 |
| Chemistry | 14 | 15 | -7 | -16 | -22 | -17 | -19 |
| French | -21 | -20 | -15 | -18 | -24 | -18 | -18 |
| Physics | 9 | 22 | -5 | -20 | -19 | -20 | -22 |
| German | -18 | -5 | -5 | -4 | 2 | -2 | 3 |
| European History | -32 | -28 | -26 | -28 | -28 | -16 | -22 |
| Latin | 9 | 7 | 7 | 5 | 20 | 19 | 11 |
| Hebrew | -31 | 26 | -8 | 29 | 12 | 16 | 53 |

SOURCE: College Board.

FIGURE 7.14 Differences Between National and California College Board Achievement Scores, 1981-87


Source: College Board.

## ETHNIC MINORITIES

Beyond the average increases that have occurred in most grades and most subject matter fields, educators and policy makers are keenly concerned about whether these overall improvements have also been experienced by California's minority students.

The California Assessment Program has not collected racial or ethnic data until recently. However, Figures 7.15 and 7.16 present CAP scores by ethnic group for the years and grades for which data are available, 1981-1986. Those data indicate that in all the subject matter areas tested-reading, writing, math, spelling, history and social science, and sci-ence-students from all of California's ethnic minority groups have been increasing their achievement scores.

More important, these achievement gains are increasing at a faster rate than those of white students. Figure 7.17 presents data (again for the limited years available) on an Index of Minority Progress, which is a figure expressing minority scores as a percent of white scores. In all instances this figure is rising, indicating that while the gap between minority and white scores remains substantial-between 20 and 30 percent-that gap appears to be slowly closing. The largest gap exists for blacks and the smallest for Asians. Indeed, as has been generally observed and commented on, the achievement levels of Asian students in mathematics exceeds that of white students.

Another interesting pattern in the data in Figure 7.17 is the difference among the three ethnic groups in the relative standing of their 8th and 12th graders. Among black and Hispanic students, 12th graders have closed more of the achievement gap between themselves and whites than have the 8th graders. But among Asian students, it is the reverse. The 8th grade Asian students have closed or nearly closed the
gap in writing and reading ( $100.4 \%$ and $95.3 \%$ ) and are well ahead of whites in math ( $109.0 \%$ ), whereas, in contrast to the pattern among black and Hispanic students, 12th graders have comparatively lower scores than 8 th graders $(88.0 \%, 91.8 \%$, and $103.1 \%$ ).

It is tempting to speculate that this pattern among Asian students is a result of the younger, 8th grade students having greater capability in English than 12th graders since more of them arrived in the U.S. earlier in their lives (by birth or immigration) than the older 12th graders. But this explanation would apply equally to Hispanics, where the achievement score difference between the 8th and 12 th graders is reversed.

A similar, though less marked, ethnic group pattern is present in the trend for SAT scores, where we also have data to compare California with the nation. Figures 7.18 through 7.20 present SAT data for California and the nation, disaggregated by ethnic group, from 1978 to 1987.

During this 10 -year period, SAT scores in California have closely mirrored those for the nation as a whole. The national and California scores were essentially identical in 1978, and both have risen about one percent since then. However, for both Califormia and the nation, the scores for Hispanics and blacks have risen at a slightly greater rate than whites, while Asian scores, relative to whites, have remained about the same during this period.

The educational and economic importance of maintaining this overall pattern of faster-than-average improvement for disadvantaged minorities is underscored by the fact that they will constitute an increasing proportion of California's student and adult populations. The recent and projected changes shown in Figure 7.21 indicate that between 1980 and 2000 the proportion of Asians in the grade 12 population will more than double, and the proportion of Hispanics will increase by nearly half.

FIGURE 7.15 Grade 12 CAP Scores by Ethnic Group, 1985-86 through 1986-87

| Ethnic Group | Scaled Scores |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
|  | Reading | 1985-86 |  | Writing | Math | Spelling | Reading | Writing |  |
|  |  |  |  | Math | Spelling |  |  |  |  |
| American Indian or |  |  |  |  |  |  |  |  |  |
| Alaskan Native | 57.5 | 57.7 | 61.8 | 65.7 | 58.9 | 58.1 | 63.5 | 66.0 |  |
| Asian | 58.6 | 61.9 | 75.1 | 71.5 | 60.0 | 62.9 | 76.1 | 72.0 |  |
| Pacific Islander | 55.9 | 56.5 | 63.4 | 68.5 | 58.4 | 59.2 | 66.1 | 70.7 |  |
| Filipino | 60.7 | 62.6 | 68.4 | 76.8 | 61.8 | 63.4 | 70.0 | 77.6 |  |
| Hispanic | 55.5 | 55.9 | 60.8 | 66.1 | 56.5 | 56.9 | 62.4 | 66.5 |  |
| Black | 54.9 | 55.2 | 57.4 | 66.4 | 56.5 | 56.6 | 59.2 | 67.0 |  |
| White | 67.6 | 68.1 | 72.7 | 72.0 | 68.2 | 68.5 | 73.8 | 72.4 |  |

SOURCE: California Department of Education.

FIGURE 7.16 Grade 8 CAP Scores by Ethnic Group, 1984-85 through 1986-87


SOURCE: California Department of Education.

FIGURE 7.17 Minority CAP Scores as a Percent of White Scores, as an Index of Minority Progress, Grades 8 and 12, $1984-85$ through
1986-87


[^3]FIGURE 7.18 Ethnic Group SAT Scores for California and the Nation, 1978-1987

|  |  | NATIONAL |  |  |  |  |  | CALIFORNIA |  |  |  | California as a Percent of Nation |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total | White | Asian | Hisp. | Black | Total | White | Asian | Hisp. | Black | White | Asian | Hisp. | Black |
| 7 | Verbal | 429 | 446 | 401 | 370 | 332 | 427 | 453 | 400 | 367 | 330 | 102 | 100 | 99 | 99 |
|  | Math | 468 | 485 | 510 | 402 | 354 | 466 | 488 | 501 | 396 | 350 | 101 | 98 | 99 | 99 |
|  | Total | 897 | 931 | 911 | 772 | 686 | 894 | 941 | 901 | 763 | 680 | 101 | 99 | 99 | 99 |
| 79 | Verbal | 427 | 444 | 396 | 370 | 330 | 428 | 453 | 394 | 369 | 334 |  |  |  |  |
|  | Math | 467 | 483 | 511 | 410 | 358 | 473 | 492 | 502 | 408 | 363 |  |  |  |  |
|  | Total | 894 | 927 | 907 | 780 | 688 | 900 | 945 | 896 | 777 | 697 |  |  |  |  |
| 80 | Verbal | 424 | 442 | 396 | 372 | 330 | 424 | 450 | 392 | 371 | 333 |  |  |  |  |
|  | Math | 466 | 482 | 509 | 413 | 360 | 472 | 491 | 498 | 408 | 364 |  |  |  |  |
|  | Total | 890 | 924 | 905 | 785 | 690 | 896 | 941 | 890 | 779 | 697 |  |  |  |  |
| 8 | Verbal | 424 | 442 | 397 | 373 | 332 | 426 | 452 | 391 | 372 | 340 |  |  |  |  |
|  | Math | 466 | 483 | 513 | 415 | 362 | 475 | 493 | 503 | 412 | 367 |  |  |  |  |
|  | Total | 890 | 925 | 910 | 788 | 694 | 901 | 945 | 894 | 784 | 707 |  |  |  |  |
| 82 | Verbal | 426 | 444 | 398 | 377 | 341 | 425 | 452 | 388 | 375 | 348 |  |  |  |  |
|  | Math | 467 | 483 | 513 | 416 | 366 | 474 | 492 | 502 | 413 | 374 |  |  |  |  |
|  | Total | 893 | 927 | 911 | 793 | 707 | 899 | 943 | 890 | 788 | 722 |  |  |  |  |
| 83 | Verbal | 425 | 443 | 395 | 375 | 339 | 421 | 449 | 382 | 374 | 348 | 101 | 97 | 100 | 103 |
|  | Math | 468 | 484 | 514 | 417 | 369 | 474 | 492 | 500 | 414 | 377 | 102 | 97 | 99 | 102 |
|  | Total | 893 | 927 | 909 | 792 | 708 | 895 | 941 | 882 | 788 | 725 | 102 | 97 | 99 | 103 |
| 84 | Verbal | 426 | 445 | 398 | 376 | 342 | 421 | 450 | 382 | 373 | 349 |  |  |  |  |
|  | Math | 471 | 487 | 519 | 420 | 373 | 476 | 493 | 506 | 419 | 382 |  |  |  |  |
|  | Total | 897 | 932 | 917 | 796 | 715 | 897 | 943 | 888 | 792 | 731 |  |  |  |  |
| 85 |  | 431 | 449 | 404 | 382 | 346 | 424 | 454 | 385 | 379 | 355 |  |  |  |  |
|  | Math | 475 | 490 | 518 | 426 | 376 | 480 | 497 | 505 | 421 | 386 |  |  |  |  |
|  | Total | 906 | 939 | 922 | 808 | 722 | 904 | 951 | 890 | 800 | 741 |  |  |  |  |
| 87 | Verbal | 430 | 447 | 405 | 379 | 351 | 424 | 453 | 387 | 374 | 359 | 101 | 96 | 99 | 102 |
|  | Math | 476 | 489 | 521 | 424 | 377 | 482 | 499 | 508 | 419 | 388 | 102 | 98 | 99 | 103 |
|  | Total | 906 | 936 | 926 | 803 | 728 | 906 | 952 | 895 | 793 | 747 | 102 | 97 | 99 | 103 |

SOURCE: California State Department of Education.

FIGURE 7.19 California Minority Sat Scores as a Percent of White Scores, as an Index of Minority Progress, 1978-87

|  | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1987 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASIANS |  |  |  |  |  |  |  |  |  |
| Verbal | 88.3 | 87.0 |  |  |  |  |  |  |  |
| Math | 102.7 | 102.0 | 101.4 | 86.5 | 85.8 | 85.1 | 84.9 | 84.8 | 85.4 |
| Total | 95.7 | 94.8 | 94.7 | 102.0 94.6 | 102.0 94.4 | 101.6 | 102.6 | 101.6 | 101.8 |
| HISPANICS |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Verbal | 81.0 | 81.5 |  |  |  |  |  |  |  |
| Math | 81.1 | 82.9 | 83.1 | 88.3 | 83.0 | 83.3 | 82.9 | 83.5 | 82.6 |
| Total | 81.1 | 82.2 | 82.8 | 83.0 | 83.9 83.6 | 84.1 | 85.0 | 84.7 | 84.0 |
|  |  |  |  |  | 83.6 | 83.7 | 84.0 | 84.1 | 83.3 |
| BLACKS |  |  |  |  |  |  |  |  |  |
| Verbal | 72.8 | 73.7 |  |  |  |  |  |  |  |
| Math | 71.7 | 73.8 | 74.1 |  |  | 77.5 | 77.6 | 78.2 | 79.2 |
| Total | 72.3 | 73.8 | 74.1 | 74.4 74.8 | 76.0 | 76.6 | 77.5 | 77.7 | 77.8 |
|  |  |  |  | 74.8 | 76.6 | 77.0 | 77.5 | 77.9 | 78.5 |

SOURCE: College Board.

FIGURE 7.20 National Minority SAT Scores as a Percent of White Scores, as an Index of Minority Progress, 1978-87

|  | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1987 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASIANS |  |  |  |  |  |  |  |  |  |
| Verbal | 89.9 | 89.2 | 89.6 |  |  |  |  |  |  |
| Math | 105.2 | 105.8 | 105.6 | 89.8 106.2 |  |  | 89.4 | 90.0 | 90.6 |
| Total | 97.9 | 97.8 | 105.6 | 106.2 | 106.2 | 106.2 | 106.6 | 105.7 | 106.5 |
| HISPANICS |  |  |  |  |  |  |  |  |  |
| Verbal |  | 83.3 |  |  |  |  |  |  |  |
| Math | 82.9 | 84.9 | 84.2 | 84.4 85.9 | 84.9 | 84.7 | 84.5 | 85.1 |  |
| Total | 82.9 | 84.1 | 85.0 | 85.9 | 86.1 | 86.2 | 86.2 | 86.9 | 88.7 |
|  |  |  |  | 85.2 | 85.5 | 85.4 | 85.4 | 86.0 |  |
| BLACKS |  |  |  |  |  |  |  |  |  |
| Verbal | 74.4 | 74.3 |  |  |  |  |  |  |  |
| Math | 73.0 | 74.1 | 74.7 | 75.1 74.9 |  |  | 76.9 | 77.1 | 78.5 |
| Total | 73.7 | 74.2 |  | 75.0 |  | 76.2 | 76.6 | 76.7 | 77.1 |
|  |  |  |  |  | 76.3 | 76.4 | 76.7 | 76.9 | 77.8 |

FIGURE 7.21 Actual and Projected Percent of Minorities in the California Grade 12 Population, 1980-2000


SOURCE: California Department of Finance.

## MINORITY LANGUAGE STUDENTS

A similar pattern of faster-than-average gain holds for the nonnative-English-speaking students who have been judged by their teachers to be limited English proficient (LEP), virtually all of whom are also ethnic minorities. Figure 7.22 presents CAP scores for the English-only and LEP groups and an Index of LEP Progress, which is the LEP scores expressed as a percent of the English-only scores.

For all the grades, years, and subjects where data are available, the scores of both the English-only and the LEP groups have been increasing, but, with only a few exceptions, the LEP students have been increasing at a faster rate.

As with the same analysis on the ethnic minority students, there remains a gap between LEP and English-only students on the order of 20 to 30 percent. But where data from earlier years are available, it is clear that progress has been made. Since 1979-80, 3rd grade LEP students have increased from 62.9 percent to 74.3 percent of the native English speakers' scores in reading, from 63.6 percent to 75.4 percent in writing, and from 73.5 percent to 83.2 percent in math (Figure 7.23).

The educational importance of these data, showing both the extent to which LEP students are improving their achievement relative to majority students and the sizeable gap that remains to be closed, is underscored by the data in Figures 7.24 and 7.25 which show how rapidly this portion of the student population has grown in the last seven years. Population projections call for even larger numbers of these students in coming years.

## HOMEWORK

The amount of time students spend on homework is strongly related to their levels of achievement. For all grades and subjects, the more time students report they spend on homework, the higher their achievement scores. Figures 7.26 and 7.27 display this relationship.

Figure 7.28 shows, for the years and grades where data are available, the trend on the amount of time spent on homework. It appears from the data for grades 6 and 8 that there was a substantial increase in time spent on homework between 1979-80 and 1984-85. It is possible that the larger portion of that increase, which occurred in the single year
from 1983-84 to 1984-85, was due to the broad set of higher expectations and requirements that accompanied the education reforms in Senate Bill 813. (However, looking back to Figure 7.1, it is interesting to note that there does not appear to have been any correlated spurt in achievement scores for that year. $)^{1}$

In any case, the amount of time spent on homework has leveled off since 1984-85. Students from all three grades report that they spend somewhat less than an hour-and-a-half a day on homework, and there have been no appreciable changes in that figure since 1984-85.

## TELEVISION

The amount of time students spend watching TV is also related to their academic performance, and apparently the relationship is a negative one.

As the data in Figure 7.29 show, the more television students report they watch, the worse their academic performance. This relationship holds for all three grades and subject matters tested. Those who watch large amounts of TV score substantially lower in reading, writing, and math than those who watch relatively little TV. The most dramatic instance of this relationship-12th grade math scores-is displayed in Figure 7.30.

Whether or not this relationship indicates that TV watching has an actively negative effect on students' academic achievement or whether it merely indicates that students who are already poor achievers for other reasons also spend a lot of time watching TV, cannot be determined from these data.

But other data strongly suggest that a high level of TV watching is, indeed, a major factor in producing lower academic achievement, possibly through the simple mechanism of TV time displacing academic interest and work. For example, as the data in Figure 7.31 show, the negative relationship between achievement and amount of time spent watching TV holds for all socioeconomic groups. Indeed, high levels of TV watching produce a sharper decline in performance among students coming from higher than lower socioeconomic homes.

It is, therefore, disheartening to note that the average level of TV watching for California's students ranges between two and three hours a day and has not shown any appreciable diminution over the last eight years (Figure 7.32).

FIGURE 7.22 CAP Scores of Limited-English-Proficient (LEP) Students, Grades 3, 6, 8, and 12, and Index of LEP Progress,* 1979-80 through 1986-87


## English Only <br> LEP <br> Grade 6

Progress *

## Gride

LEP
Index of LEP
Progress*
$64.6 \quad 64.6 \quad 65.4$
$\begin{array}{llll}43.2 & 42.9 & 44.5 & - \\ 66.9 & 66.4 & 68.0 & -\end{array}$
$45.5 \quad 44.9 \quad 45.8$
$\begin{array}{lll}69.3 & 69.7 & 71.0\end{array}$
English Only
LEP
$\begin{array}{lll}70.3 & 69.0 & 71.1\end{array}$
56.758 .7
*LEP Scores as a percent of English-only scores
SOURCE: California Department of Education.

FIGURE 7.23 Index of LEP Progress, CAP Grade 3 Scores, 1979-80 through 1986-87


-     - READING
- O- WRITING
-     - MATH

SOURCE: California State Department of Education.

FIGURE 7.24 Percent of California Students Judged by Teachers to be "Limited English Proficient," Grades 3, 6, 8, and 12, 1979-80 through 1986-87

|  | $79-80$ | $80-81$ | $81-82$ | $82-83$ | $83-84$ | $84-85$ | $85-86$ | $86-87$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade 3 | 9.3 | 11.4 | 12.0 | 13.0 | 15.0 | 17.0 | 16.0 | 16.0 |
| Grade 6 | 6.0 | 6.3 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 10.0 |
| Grade 8 | - | - | - | - | 7.0 | 7.0 | 8.0 | 9.0 |
| Grade 12 | - | - | - | - | - | 4.6 | 4.7 | 5.2 |

SOURCE: California State Department of Education.

FIGURE 7.25 Percent of California Students Judged by Teachers to be "Limited English Proficient," Grades 3 and 6, 1979-80 through 1986-87


SOURCE: California State Department of Education.

FIGURE 7.26 Percent and Scores of 6th and 8th Grade Students by Time Spent on Homework, 1985-86

| Hours | \% of Students | \% Correct Scores |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  |  | Reading | Writing | Math |
| Grade 6 | 2 |  |  |  |
| None | 33 | 65.4 | 71.0 | 59.5 |
| $<1$ hour | 50 | 72.2 | 75.8 | 64.9 |
| $1-<2$ hours | 15 | 74.1 | 77.2 | 65.9 |
| 2 hours or more |  | 73.4 | 76.6 | 65.5 |
|  |  |  |  |  |
| Grade 8 | 3 | 54.5 | 49.9 | 46.4 |
| None | 31 | 62.5 | 58.3 | 53.4 |
| $<1$ hour | 48 | 65.9 | 62.0 | 56.1 |
| $1-<2$ hours | 18 | 68.5 | 65.0 | 59.4 |
| 2 hours or more |  |  |  |  |

SOURCE: California Department of Education

FIGURE 7.27 12th Grade CAP Scores by Hours Reported Spent on Homework, 1985-86


SOURCE: California Department of Education.

FIGURE 7.28 Time Spent on Homework, Grades 6, 8, and 12, 1979-80 through 1986-87


FIGURE 7.29 Percent and Scores of 6th, 8th, and 12th Grade Students by Time Spent Watching TV, 1985-86

| Hours | Percent Correct Scores |  |  |
| :---: | :---: | :---: | :---: |
|  | Reading | Writing | Math |
| Grade 6 |  |  |  |
| 0 | 76.9 | 79.5 | 69.0 |
| 0-1/2 | 75.4 | 78.2 | 68.0 |
| 1/2-2 | 74.7 | 77.7 | 67.1 |
| 1-2 | 75.3 | 78.1 | 67.8 |
| 2-3 | 74.8 | 77.7 | 67.0 |
| 3-4 | 73.9 | 77.0 | 65.7 |
| 4-5 | 72.6 | 76.1 | 64.3 |
| 5+ | 68.5 | 73.1 | 60.9 |
| Grade 8 |  |  |  |
| 0 | 68.1 | 63.6 | 59.0 |
| 0-1/2 | 67.7 | 64.0 | 59.1 |
| 1/2-2 | 67.4 | 63.5 | 58.7 |
| 1-2 | 67.6 | 63.7 | 58.7 |
| 2-3 | 66.4 | 62.5 | 57.0 |
| 3-4 | 65.0 | 61.0 | 55.2 |
| 4-5 | 63.6 | 59.5 | 53.4 |
| $5+$ | 58.3 | 54.6 | 48.8 |
| Grade 12 |  |  |  |
| 0-1/2 | 68.0 | 69.5 | 74.5 |
| 1/2-2 | 65.3 | 66.5 | 72.0 |
| 1-2 | 63.7 | 64.5 | 70.3 |
| 2-3 | 61.5 | 62.0 | 67.2 |
| 3-4 | 59.6 | 59.8 | 64.5 |
| 4-5 | 58.6 | 58.5 | 62.8 |
| 5+ | 56.6 | 56.6 | 61.1 |

SOURCE: California Department of Education.

FIGURE 7.30 12th Grade CAP Math Scores By Hours Spent Watching TV, 1985-86


SOURCE: California Department of Education.


| Number of Students by |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education Level of Parents | 0-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-6 | 6 or More |  |  |
| Advanced Degree | 16,923 | 9,244 | 6,128 | 3,424 | 1,730 | 818 | 1,323 | 39,590 | 17.4\% |
| 4 Year College | 14,928 | 10,097 | 7,725 | 4,613 | 2,425 | 1,127 | 1,656 | 42,571 | 18.7\% |
| Some College | 17,679 | 14,017 | 12,305 | 8,149 | 4,491 | 2,233 | 3,366 | 62,240 | 27.3\% |
| High School Graduate | 13,090 | 11,885 | 11,850 | 8,822 | 5,294 | 2,714 | 4,101 | 62,240 57,756 | 25.4\% |
| Not a High School Graduate | 5,097 | 4,968 | 5,074 | 4,127 | 2,462 | 1,403 | 2,261 | 57,156 25,392 | 25.4\% |
| Total | 67,717 | 50,211 | 43,082 | 29,135 | 16,402 | 8,295 | 12,707 | 227,549 | 11.2\% |
| Percent | 29.8\% | 22.1\% | 18.9\% | 12.8\% | 7.2\% | 3.7\% | 12,707 | 227,549 | 100.0\% |

[^4]FIGURE 7.32 Hours Spent Watching TV, Grades 5, 6, 8, and 12, 1979-80 through 1986-87

|  | 79-80 | 83-84 | $84-85$ | 85-86 | 86-87 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Grade 6 |  |  |  |  | 86-87 |
| $0-1$ | 28 | 13 | 15 | 16 | 15 |
| 1-2 | 23 | 17 | 18 | 24 | 18 |
| 2-3 | 17 | 20 | 20 | 27 | 20 |
| 3-4 | 11 | 17 | 17 | 13 | 16 |
| 4+ | 21 | 32 | 30 | 19 | 29 |
|  | 100\% | 99\% | 100\% | 99\% | 98\% |
| Average | $2 \mathrm{hrs}$. , 14 mins. | 2 hrs ., 47 mins. | 2 hrs ., 47 mins. | 2 hrs ., 43 mins. | 2 hrs., 40 mins. |
| Grade 8 |  |  |  |  |  |
| $0 \cdot 1$ | - | 14 | 15 |  |  |
| 1-2 | - | 18 | 19 | 19 | 15 |
| 2-3 | - | 20 | 21 | 22 | 19 |
| $4+$ | - | 17 | 17 | 17 | 16 |
|  | - | 31 | 28 | 28 | 28 |
|  |  | 100\% | 100\% | 101\% | 99\% |
| Average |  | 2 hrs ., 50 mins. | 2 hrs., 44 mins. | 2 hrs., 43 mins. |  |
| Grade 12 |  |  |  |  |  |
| $0-1$ | 30 | 37 | -- |  |  |
| 1-2 | 22 | 23 | -- | 24 |  |
| 2-3 | 19 | 17 | -- | 24 17 | 26 |
| 3-4 | 13 | 10 | -- | 17 | 19 |
| $4+$ | 16 | 13 | -- | 12 | 14 |
|  | 100\% | 100\% | -- | 92\%** | 100\% |
| Average | 2 hrs., 8 mins. | 1 hr ., 53 mins . | -- | 2 hrs ., 2 mins. | 2 hrs., 6 mins. |
| * Missing |  |  |  |  |  |

SOURCE: California Department of Education.

## CONCLUSIONS

In light of these data, what conclusions can be drawn about the status of academic achievement among California's public school students?

First, California's students are neither extraordinarily good nor remarkably bad. They are close to the national average. Based on the studies cited above which have equated the California Assessment Program test scores to those of other nationally normed tests, Califormia's 3 rd and 6 th graders are performing above the national average, whereas the 8th and 12th graders score at or below it.

Second, the achievement level of elementary students has been increasing for more than a decade while that of secondary students has remained about the same; but this long period of increase may now be leveling off.

Third, with respect to the progress and status of California's minority students, black and Hispanic students have been increasing their achievement faster than whites, but the gap which remains to be closed is substantial-on the order of 20 to 30 percent. The same holds for students who have limited English proficiency, most of whom are also ethnic minority students.

Asian students are also increasing their academic performance faster than white students (on the CAP scores, but not on the SAT), but, unlike black and Hispanic students, they have nearly closed the achievement gap in reading and writing and have moved ahead of white students in math.

The larger policy question is what can be done to maintain the increases that have occurred (among 3rd and 6th graders and minority students), to expand those gains into categories and grades where there has not been a sustained pattern of improvement (e.g., 12th graders), and, indeed, to accelerate the rate of improvement for all California students. The factors producing academic achievement are complex and the policy task frustrating for the educators, public officials, and parents who have the responsibility for improving it. No single action or policy is likely to hold the key to improved student achievement.

Figure 7.33 brings together, on a comparable ratio scale, data on selected indicators of student achievement in California (reading and SAT scores) and some of the major factors widely believed to be key determiners of it-ethnic composition of the student population, teacher/pupil ratio, per-pupil expenditures, and teacher salaries. As is readily apparent from both the direction and slope of these trend lines, the story of the causes of student achievement is complex.

First, there are contrary trends among the achievement indicators themselves. While 12th grade scores have been stubbornly flat for a decade, major increases have occurred at the 3rd grade. Scholastic Aptitude Test verbal scores have dropped from above to below the national average, but SAT math scores remain consistently above it.

Second, there can be little doubt that the increased number of disadvantaged ethnic and linguistic minority students poses a major additional challenge to the school system. Yet, as the percentage of these students has increased dramatically, achievement scores at most levels have held their own or, in some cases, also increased substantially.

Third, there appears to be little direct relationship between teacher salaries and student achievement scores. Moreover, because much of the research literature has concluded that only dramatically large reductions in class size are likely to make much difference in student performance, and because such changes are unlikely to occur in California due to their enormous costs, the trend on pupils per teacher is nonindicative.

Finally, per-pupil expenditures have risen in recent years, and thus generally correlate with the achievement increases among 3rd and 6 th graders and among minorities, but not with the flat pattern of 12 th grade scores.

All of this indicates that the factors which affect student achievement are many and complex and that those who are engaged in the crucially important effort to improve California student achievement cannot deceive themselves or others that the solutions are simple.

[^5]FIGURE 7.33 Comparative Trends of Factors Related to Achievement in California, 1977-1987


## chapter 8

## Fiscal Resources

California's public school system is the largest in the nation and requires the largest fiscal base. For 1987-88, total funding is estimated to be $\$ 21.1$ billion (Figure 8.1). However viewed, this represents an awesome amount. Few states have state and local expenditures for all government functions that total $\$ 21.1$ billion. In other words, financing California's public schools is one of the largest fiscal undertakings in the United States. Even though this dollar amount supports education services for over 4.7 million students (average daily attendance or $\mathrm{ADA}^{1}$ ), at an average of $\$ 4,469$ per student, ${ }^{2}$ its sheer magnitude makes explaining school funding to the public a difficult task.

As Figure 8.1 shows, California school funding has increased substantially during the 1980s but, after adjusting for pupil growth and inflation, has taken an uneven course. Between 1980 and 1988, total funds for public schools increased by $\$ 10.1$ billion, or 92.4 percent. Since just 1983 , when Califormia enacted its comprehensive education reform, SB 813 , funding has risen by $\$ 8.3$ billion, a sizeable five-year funding hike by any standard.

However large these overall totals may be, they must be adjusted by the number of pupils and inflation (both of which have risen in the 1980s) to determine whether real resources per child, measured in terms of purchasing power, have increased. When these adjustments are made, the results are more sobering. First, ADA increased substantially during this decade, rising by 528,261 between 1980 and 1988, a number close to the size of Los Angeles Unified School District. Thus, a large portion of the new money for schools simply provided education services to a large number of new students. At the same time, a larger portion of the new money also raised overall funding per pupil. Specifically, funding per pupil increased from $\$ 2,611$ in 1980 to $\$ 4,469$ in 1988 , a rise of 71.2 percent which is less than the total increase of 92.4 percent. Thus, about one-fourth of new funds covered enrollment increases, while the rest increased overall funding per child.

But when the per-pupil figures are adjusted for inflation, ${ }^{3}$

## HIGHLIGHTS

- For $1987-88$, total funding is estimated to be $\$ 21.1$ billion.
- For $1987-88$, per-pupil funding equaled $\$ 4,469$ (includes General Fund, special funds, and capital outlay).
- Between 1980 and 1988 , total funds for public schools increased by $\$ 10.1$ billion, or 92.4 percent. Since just 1983, when California enacted SB 813 , funding has risen by $\$ 8.3$ billion.
- When these figures are adjusted for enrollment growth and inflation, the real increase is quite small. rising from $\$ 2,360$ per pupil in 1980 to $\$ 2,547$ in 1988, a jump of $\$ 187$ or just 7.9 percent.
- Of the approximately $\$ 2$ million spent annually on each California school, classroom expendituresincluding teachers, instructional aides, and bookscompose 63 percent; other site expenditures-including operation, maintenance, and administra-tion-compose 19 percent; district and county administration composes 5.5 percent; and the State Department of Education composes 0.5 percent.
- Revenues are highly equalized in California; 95.6 percent of all students attend districts with a perpupil revenue limit within an inflation adjusted $\$ 100$ band (now $\$ 238$ ) of the statewide average for each district type (elementary, high school, and unified).
- The state provides 65 percent of California public school revenues; local and other sources, 26.5 percent; the federal government, about 6 percent; and the lottery, about 2.5 percent ( $\$ 100 /$ pupil).
- Each year since California's 1983 education reform, K-12 expenditures as a percentage of general fund expenditures have not changed much, being slightly above or slightly below 39 percent.
- California's expenditures per pupil for K-12 public education, $\$ 3,751$, is slightly below the national
continued
average of $\$ 3,970$ (National Education Association figures excluding capital outlay and adjusted for national comparability.) Califomia spends approximately $\$ 2,500$ per pupil less than New York, or $\$ 75,000$ less per classroom of 30 students.
- California's expenditures on public schools as a percentage of total state and local governmental expenditures for all current functions was 20.8 percent in 1985-86, compared to the national average of 24 percent.
- California's public schools will need an additional $\$ 1.5$ billion for $1988-89$ to cover an increase in average daily attendance (ADA) of 120,000 students
and a 4.37 percent inflation rate.
- In the 1988-89 budget, the governor proposed to add an additional \$1.7 billion for public schools, the largest one-year education funding increase in California's history.
- Just to cover enrollment growth and inflation over the next 10 years, school funding will need to increase by $\$ 20.6$ billion, or essentially double.
- Absent Gann (and perhaps Proposition 13) modifications, state and local governments, especially schools, will be hard pressed to increase expenditures to maintain current service quality levels.

FIGURE 8.1 K-12 Total Revenues, Nominal and Real, 1979-80 to 1987-88

| Year | Total Funding |  |  |  | 1978-79 Dollars ${ }^{\text {a }}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total <br> Funding ${ }^{\text {b }}$ | ADA | Per ADA | Percent <br> Change | Per ADA | Percent Change |
| 79-80 | \$10,981.6 | 4,206,150 | \$2,611 | 18.3 | \$2,360 | 6.9 |
| 81 | 12,341.2 | 4,214,089 | 2,929 | 12.2 | 2,415 | 2.3 |
| 82 | 12,615.4 | 4,200,678 | 3,003 | 2.5 | 2,302 | -4.7 |
| 83 | 12,864.1 | 4,230,065 | 3,041 | 1.3 | 2,199 | -4.5 |
| 84 | 14,150.0 | 4,259,631 | 3,322 | 9.2 | 2,297 | 4.5 |
| 85 | 15,813.1 | 4,351,416 | 3,634 | 9.4 | 2,386 | 3.9 |
| 86 (est) | 17,951.8 | 4,472,123 | 4,014 | 10.5 | 2,520 | 5.6 |
| 87 (est) | 19,549.0 | 4,616,789 | 4,234 | 5.5 | 2,560 | 1.7 |
| 88 (est) | 21,129.3 | 4,734,411 | 4,469 | 5.6 | 2,547 | -0.5 |
| Cumulative Change |  |  |  |  |  |  |
| Amt | \$10,147.7 | 528,261 | \$1,858 | - | \$187 | - |
| Percent | 92.4\% | 12.5\% | 71.2\% | - | 7.9\% | - |

${ }^{2}$ Adjusted by the GNP deflator for state and local government purchases.
${ }^{\text {b }}$ Includes local debt. Includes all General Fund and special fund monies in item 6100, contributions to the State Teachers' Retirement System (STRS), and state capital outlay. Does not include $\$ 116.2$ million in debt service on general obligation bonds for education and $\$ 20$ million identified by the governor as available for GAIN-related expenditures. Includes lottery revenues, combined state/federal grants, county income, and other miscellaneous revenues. [Total lottery funds (dollars in millions): $1985-86, \$ 558.4 ; 1986-87, \$ 394.6 ; 1987-88$, \$493.0. ]

SOURCE: Legislative Analyst, September 1987, revised figures.
the purchasing power increase is small, rising from $\$ 2,360$ in 1980 to $\$ 2,547$ in 1988 , a jump of $\$ 187$ or just 7.9 percent (Figure 8.2). Thus, inflation-adjusted figures suggest that even though an additional $\$ 10.1$ billion has been pumped into California's public education system during the 1980s, real resources have increased by less than 10 percent.

Another fact shown in Figure 8.1 is that inflation-adjusted per-pupil funding changes have taken a "roller-coaster" ride during the 1980s. Funding increased some years, then dropped for a few years, then increased again for a few years, and then dropped again. This inconsistent fiscal pattern impedes effective management of local education systems.

In short, while California public school funding has increased by over $\$ 10$ billion in the 1980 s, it has risen only 7.9 percent in inflation-adjusted per-pupil terms, and the pattern of growth has been inconsistent from year to year.

## SOURCES OF PUBLIC SCHOOL REVENUES

California public school revenues are derived from local, state, and federal sources (Figure 8.3). The state provides the largest amount, with local funds composing only one-third that of state funds and federal and other sources playing even smaller roles. The figure shows that state funds increased by over $\$ 1$ billion each year from 1983 to 1987 but increased by only about $\$ 400$ million for 1988 . While local property tax revenues were stagnant from 1982 to 1984, they have been rising since then, increasing by a total of more than $\$ 1$ billion between 1984 and 1988. Federal revenues have stayed about the same during the 1980s, floating down slightly each year between 1980 and 1983 and then rising marginally from 1983 to 1988. When federal revenues are adjusted for inflation, the 1988 figure is less than the 1980 figure.

FIGURE 8.2 K-12 Total Revenues, Nominal and Real, 1979-80 to 1987-88


SOURCE: Legislative Analyst, September 1987, revised figures.

FIGURE 8.3 Sources of K-12 Education Funding, 1979-80 to 1987-88 (millions)

| Year | Local $^{\text {a }}$ | State | Federal | Other | Lottery |
| :--- | ---: | ---: | ---: | ---: | ---: |
| $1979-80$ | $2,180.0$ | $6,998.5$ | $1,109.4$ | 702.7 | $\mathrm{n} / \mathrm{a}$ |
| $1980-81$ | $2,409.7$ | $7,866.4$ | $1,154.5$ | 910.6 | $\mathrm{n} / \mathrm{a}$ |
| $1981-82$ | $2,933.6$ | $7,837.3$ | $1,000.7$ | 843.8 | $\mathrm{n} / \mathrm{a}$ |
| $1982-83$ | $2,941.8$ | $8,100.7$ | 967.6 | 854.0 | $\mathrm{n} / \mathrm{a}$ |
| $1983-84$ | $2,983.7$ | $9,191.8$ | $1,032.7$ | 941.8 | $\mathrm{n} / \mathrm{a}$ |
| $1984-85$ | $3,305.3$ | $10,400.7$ | $1,096.2$ | $1,010.9$ | $\mathrm{n} / \mathrm{a}$ |
| $1985-86$ <br> $\quad$ estimated | $3,586.0$ | $11,607.4$ | $1,115.8$ | $1,084.1$ | 558.3 |
| $1986-87$ <br> estimated | $3,813.3$ | $12,685.5$ | $1,262.9$ | $1,162.6$ | 394.6 |
| $1987-88$ <br> approximated | $4,088.3$ | $13,076.1$ | $1,225.1$ | $1,246.8$ | 493.0 |

${ }^{\text {- }}$ Includes state property tax subventions.
SOURCE: Legislative Analyst, September 1987, revised figures.

Lottery revenues rose above expectations in the first year, dropped the second year, then rose moderately. The estimated lottery total for 1988 is below the total for 19851986, the year it began. The lottery provides only about $\$ 100$ per pupil. This contrasts with the public's perception. According to one recent poll, 22 percent of the public thinks the lottery is the single largest provider of school funds.

In percentage terms, the state is the major fiscal agent for California public schools (Figure 8.4). State appropria-
tions compose 65 percent of total school funding, compared to a national average of about 50.1 percent. Thus, the state role in funding Califormia schools is much larger than it is nationwide. The reason is Proposition 13, which limits local property tax rates to one percent of assessed value and limits assessed values to only minute increases except when property is sold. According to the poll mentioned above, 34 percent of the public thinks property taxes are the major source of school funding.

FIGURE 9.4 Percent Revenues for K-12 Education by Source, 1979-80 to 1987-88

| Year | Local | State | Federal | Other | Lottery |
| :--- | :---: | :---: | :---: | :---: | :---: |
| $1979-80$ | 19.9 | 63.7 | 10.0 | 6.4 | $\mathrm{n} / \mathrm{a}$ |
| 81 | 19.5 | 63.7 | 9.4 | 7.4 | $\mathrm{n} / \mathrm{a}$ |
| 82 | 23.3 | 62.1 | 7.9 | 6.7 | $\mathrm{n} / \mathrm{a}$ |
| 83 | 22.9 | 63.0 | 7.5 | 6.6 | $\mathrm{n} / \mathrm{a}$ |
| 84 | 21.1 | 65.0 | 7.3 | 6.6 | $\mathrm{n} / \mathrm{a}$ |
| 85 | 20.9 | 65.8 | 6.9 | 6.4 | $\mathrm{n} / \mathrm{a}$ |
| 86 | 20.0 | 64.7 | 6.2 | 6.0 | 3.1 |
| $\quad$ estimated | 19.7 | 65.7 | 6.5 | 6.0 |  |
| 87 |  |  |  | 2.0 |  |
| $\quad$ estimated | 20.3 | 65.0 | 6.1 | 6.2 | 2.4 |
| 88 |  |  |  |  |  |
| approximated |  |  |  |  |  |

SOURCE: Legislative Analyst, September 1987, revised figures.

The public is relatively uninformed about the nature of school funding in California. Few taxpayers know that the state provides most school funds and that funding per child, after adjusting for inflation, is now only marginally larger than it was in 1980.

Even at the state level, there is disagreement over K-12 funding as it relates to the General Fund. But as Figure 8.5 demonstrates, education funding as a percentage of state General Fund expenditures has remained relatively constant since 1984, for both K-12 and higher education. While K-12 funding relative to General Fund expenditures dipped in the recession period of the early 1980s, it bounced back to 39.1 percent when education reform funding increases began. From 1987 to 1988 it dropped 0.8 percentage points to 38.3 percent. The 1988 figure, however, approximates the 1986 figure. Further, a one percent drop represents only $\$ 328$ million in 1988, a not insignificant amount but less than the amount of the lottery. Figure 8.5 shows that each year since California's 1983 education reform, K-12 expenditures as a percentage of General Fund expenditures have been about the same and that K-12 funding would constitute a declining share of the General Fund budget only if the drop between 1987 and 1988 were maintained into 1989 and beyond.

## NATIONAL COMPARISONS

Another way to gauge California's fiscal support of public schools is to compare it to national and other state averages. On most national fiscal comparisons, California ranks below average.

First, California education spending as a percentage of its personal income is nearly one full percentage point below the national average (Figure 8.6). For 1987-88, it is estimated that California will spend 3.9 percent of its citizens' personal income on education compared to the national average of 4.6 percent. The numbers also show that California K - 12 education spending relative to personal income dropped more from 1980 to 1982, the years of the deep 1980s' recession, than they did nationwide. California figures also show that between 1982 and 1986, the years over which SB 813 was implemented, $\mathrm{K}-12$ spending as a percentage of personal income rose substantially and began to approach the national average. However, while the national average figure has continued to increase, though marginally, since 1986 the California figure has dropped, though also marginally. It is difficult to predict the directions of these figures either for the state or the nation. Nevertheless, the clear conclusion is that California devotes a lower percentage of personal income to public elementary and secondary schools than does the nation. (It should be noted that this statistic is not only a function of state taxing and spending efforts but $i t$ is also related to the relative number of school-age citizens to the total population.)

Second, California spends per pupil somewhat below the national average, below several states which have similarly large enrollments and economic systems and which are as technologically sophisticated as Califormia. As shown in Figure $8.7^{4}$ California's expenditures per ADA estimated by the National Education Association (NEA) for 1986-87 are $\$ 3,751$, slightly below the national average of $\$ 3,970$. Even though the NEA attempts to adjust all state figures to make

FIGURE 8.5 Education and California General Fund Expenditures

| Year | Total General <br> Fund Expend. | K-12 <br> Expend. | K-12 Expend. <br> as \% of Total | Higher Ed. <br> Expend. | Higher Ed. <br> as \% of Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 80 | $\$ 18,519.7$ | $\$ 6,989.9$ | $37.7 \%$ | $\$ 2,949.7$ | $15.9 \%$ |
| 81 | $20,995.4$ | $7,456.9$ | 35.5 | $3,385.6$ | 16.1 |
| 82 | $21,606.3$ | $7,638.5$ | 35.4 | $3,431.5$ | 15.9 |
| 83 | $21,661.7$ | $7,742.7$ | 35.7 | $3,430.4$ | 15.8 |
| 84 | $22,834.8$ | $8,924.6$ | 39.1 | $3,525.8$ | 15.4 |
| 85 | $25,721.6$ | $9,991.5$ | 38.8 | $4,124.1$ | 16.0 |
| 86 | $28,841.3$ | $11,072.4$ | 38.4 | $4,517.9$ | 15.7 |
| 87 | $31,487.6$ | $12,210.9$ | 38.8 | $4,826.2$ | 15.3 |
| 88 | $32,772.1$ | $12,541.2$ | 38.3 | $5,156.2$ | 15.7 |

SOURCE: Department of Finance.

Figure 8.6 California Revenue for K-12 Education as a Percent of Personal Income

California

| Year | Personal Income* | Revised <br> Estimates* | Percent Income | Personal <br> Estimates* | Revised <br> Estimates* | Percent Income |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1979-80 | \$244,778 | \$9,300 | 3.8\% | \$2,028,510 | \$95,027 | 4.7\% |
| 1980-81 | 276,110 | 9,260 | 3.4 | 2,254,076 | 102,777 | 4.6 |
| 1981-82 | 308,730 | 9,478 | 3.1 | 2,514,231 | 110,274 | 4.4 |
| 1982-83 | 328,035 | 12,050 | 3.7 | 2,663,498 | 120,433 | 4.5 |
| 1983-84 | 352,459 | 13,300 | 3.8 | 2,834,375 | 128,331 | 4.5 |
| 1984-85 | 389,190 | 14,982 | 3.8 | 3,101,267 | 139,635 | 4.5 |
| 1985-86 | 422,676 | 16,745 | 4.0 | 3,320,099 | 151,333 | 4.6 |
| 1986-87 | 456,098 | 17,769 | 3.9 | 3,529,522 | 160,908 | 4.6 |
| (est) ${ }^{\dagger}$ |  |  |  |  |  |  |
| 1987-88 | 505,561 | 19,549 | 3.9 | 3,778,028 | 172,507 | 4.6 |
| (est) ${ }^{\dagger}$ |  |  |  |  |  |  |

* in millions
${ }^{\dagger}$ estimate based on three year average

National
National
4.7\%
4.6
4.4
4.5
4.5
4.5
4.6
4.6
4.6

SOURCE: U.S. Department of Commerce, Survey of Current Business, August 1987 and revised revenue estimates from National Education Association, Estimates of School Statistics, Washington, DC: NEA, selected years.
them comparable, differences in state school funding structures make this a difficult objective to achieve. ${ }^{5}$ Because of adjustment difficulties, it is probably best to claim that California today spends about the same as the national average expenditure per pupil.

The numbers in Figure 8.7 reveal that on a per-pupil basis, California spends below New York, Illinois, Pennsylvania, and Michigan. Of the six states with the largest enrollments, Califormia's per-pupil expenditures are above only Texas, a state with historically low education spending. Califomia spends more than $\$ 2,500$ less per pupil than does New York; assuming a class size of 28 , this translates into $\$ 75,000$ less per classroom. California spends $\$ 1,000$ less per pupil than does Pennsylvania. Indeed, when compared to several states in the midwest and northeast, California spends considerably less per pupil.

Anecdotal evidence suggests that these funding differences produce differences in programs and services. Most
elementary schools in the higher-spending midwest and northeast would have, in addition to one teacher for every 20 25 students, a music and art teacher, perhaps a science teacher, a physical education teacher, maybe a reading specialist, a librarian, if not a $2-3$ staff library and media resource operation, and day care and preschool in many places.

Moreover, California spends less on public schools as a percentage of personal income than do most of the other five large-enrollment states. In 1985-86, California spent \$37.37 per $\$ 1,000$ of personal income, compared to $\$ 49.01$ in New York, $\$ 52.29$ in Michigan, and $\$ 49.15$ in Texas; the national average was $\$ 43.83$, above California and below these other states. Further, California expenditures on public schools as a percentage of total state and local governmental expenditures for all functions was less than in any of these other five states, with the Califormia figure just over 20 percent and the Texas figure just under 30 percent, compared to a national aveage of 24 percent. In short, on a comparative basis,

California's public schools receive less priority for state and local resources than do public schools in the next five largest public school enrollment states.

The data in Figure 8.7 also show that California's teachers earn, on average, near the top of the scale on a comparative state basis and have among the largest class sizes. While lower teacher salaries could provide revenues to hire more
teachers, California teacher salaries are high in large part because of the high cost of housing and living in the state. ${ }^{6}$

Overall, the data in Figure 8.7 suggest that California places a lower priority on public school funding than do several other large-enrollment states, spends at about the national average, has above-average teacher salaries, and places more students in each classroom.

FIGURE 8.7 Comparison of Selected School Finance Variables, California versus Five Other Large States

| Variable | California ( 4.2 mil.) | $\begin{gathered} \text { Texas } \\ (2.9 \text { mil. }) \end{gathered}$ | New York <br> ( 2.3 mil.) | Illinois ( 1.6 mil ) | Pennsylvania ( 1.6 mil .) | Michigan ( 1.5 mil .) | National <br> Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Estimated <br> Expenditure <br> per Pupil <br> ADA 86-87 | \$3,751 | \$3,584 | \$6,299 | \$3,980 | \$4,752 | \$3,954 | \$3,970 |
| 1985-86 <br> State/Local <br> Expenditures <br> for Public <br> Schools <br> Per $\$ 1,000$ <br> Personal Income | \$37.37 | \$49.15 | \$49.01 | \$37.08 | \$43.61 | \$52.29 | \$43.83 |
| 1985-86 <br> State/Local <br> Expenditures for Local Public Schools as \% of Total State and Local Expenditures | 20.8\% | 29.5\% | 21.8\% | 23.2\% | 26.8\% | 25.5\% | 24.0\% |
| Estimated <br> Avg. Classroom <br> Teacher Salary 1986-87 | \$31,170 | \$25,308 | \$32,620 | \$28,430 | \$27,429 | \$31,500 | \$26,704 |
| Student <br> Enrollment per <br> Classroom Teache 1986-87 | $22.9$ | 17.5 | 14.7 | 18.0 | 16.4 | 20.9 | 17.8 |

Note: Comparisons are made among large states with diversified economies and similar costs of living.
SOURCE: National Education Association, Estimates of School Expenditures, 1986-87; U.S. Bureau of the Census, Governmental Expenditures, 1985-86

## CURRENT EXPENDITURES

District general fund expenditures in 1985-86, the most recent year for complete data, totaled $\$ 13,338.1$ million (Figure 8.8). Of that total, $\$ 5,980.6$ million ( 45 percent) was expended for teacher salaries, $\$ 665.9$ million ( 5 percent) for administrator salaries, $\$ 510.1$ million ( 3.8 percent) for other certified salaries such as music and art specialists, $\$ 445.2$ million ( 3.3 percent) for instructional aides, $\$ 1,798.5$ million ( 13.5 percent) for other support personnel such as guidance counselors, $\$ 2,016$ million ( 15.1 percent) for employee benefits, $\$ 592.7$ million ( 4.4 percent) for books and instructional supplies, $\$ 997$ million ( 7.5 percent) for services and operating and maintenance expenses, and $\$ 332.1$ million ( 2.5 percent) for capital outlay.

## FIGURE 8.8 School District General Fund Expenditures, 1985-86

| Category | Amount (Millions) |
| :--- | ---: |
| Total | $\$ 13,338.1$ |
| Teachers Salaries | $5,980.6$ |
| Administrator Salaries | 665.9 |
| Other Certified Salaries | 510.1 |
| Instructional Aides | 445.2 |
| Other Support Personnel | $1,798.5$ |
| Employee Benefits | $2,016.0$ |
| Books and Supplies | 592.7 |
| Services and Operating Expenses | 997.1 |
| Capital Outlay | 332.1 |

SOURCE: State Department of Education.
These figures, however, say little about expenditures on a program basis, such as for the regular instructional program or compensatory and special education. Further, the figures provide little insight into how the approximately $\$ 2$ million per school site is spent. If teachers at the average school, the argument goes, collectively earn about $\$ 914,000$ in salaries and benefits, what happens to the rest of the money?

In order to answer this question, expenditures by object (such as those provided in Figure 8.8) are needed for each program in a school, so that expenditures by object and program can be analyzed simultaneously and in relationship to each another. While Califormia currently is phasing in an accounting system that will produce such data, the system is a few years away from being implemented completely.

However, the State Department of Education, using data from selected school districts that had expenditures by object and program for 1985-86, recently conducted a study and produced on a statewide basis average expenditures per school. The results are intriguing (Figure 8.9).

Expendituresper school averaged $\$ 2,046,000$. These can be divided into classroom expenditures, site-level expenditures, district and county administration, and State Department of Education. Classroom expenditures compose 63 percent of total school operating expenditures. Within that category, classroom teachers consitute 45 percent of total school expenditures; specialized teachers such as special education and music and art constitute 5 percent; pupil support personnel including counselors, psychologists, nurses, and librarians constitute another 4 percent; and books, materials, and supplies constitute the last 4 percent of classroom expenditures.

Site expenditures, other than classroom expenditures, compose 31 percent of total school operating expenditures. Operations, maintenance, transportation, and food constitute 19 percent of this total figure; instructional support, including curriculum specialists and supervisors and media technicians, constitutes another 5 percent; and school site leadership (administration) constitutes the last 7 percent.

District and county administration composes 5.5 percent of total school expenditures, and the State Department of Education composes the remaining 0.5 percent. If site leadership is added to these administrative expenses, administration totals just 13 percent for each school on average; operations, maintenance, transportation, and food, 19 percent; and classroom expenditures, including pupil support personnel, 68 percent.

## SCHOOL FINANCE EQUALIZATION

The predominant California school finance issue in the 1970s was the Serrano court decision and its mandate to reduce wealth-related expenditure disparities to a $\$ 100$ band above and below the statewide average expenditure per pupil. Indeed, most states across the nation still grapple with strengthening school finance equalization formulas designed to reduce both disparities in per-pupil spending and any relationship between expenditures per pupil and local property wealth per pupil. California is less concerned with this issue largely because, since Senate Bill 90 in 1973 and Proposition 13 in 1978, the state has statutorily established a per-pupil expenditure level for all districts. Analytically, California has a full state-funding school finance structure,

FIGURE 8.9 Expenditures Per School, 1985-1986

| Category | Expenditure <br> per School | Percent <br> of Total |
| :--- | ---: | :---: |
| A. Classroom Expenditures | $\$ 1,286,000$ | $63 \%$ |
| 22 Classroom Teachers | 914,000 | $45 \%$ |
| 2.5 Specialized Instructors | 102,000 | $5 \%$ |
| 7.0 Instructional Aides | 94,000 | $5 \%$ |
| 2.0 Pupil Personnel Support | 84,000 | $4 \%$ |
| Books, Supplies, Equipment | 92,000 | $4 \%$ |
| B. Other Site Expenditures | 629,000 | $31 \%$ |
| Operation, Maintenance, |  |  |
| Transportation | 395,000 | $19 \%$ |
| Instructional Support | 95,000 | $5 \%$ |
| School Site Leadership | 139,000 | $7 \%$ |
| C. District/County Administration | 120,000 | $5.5 \%$ |
| D. State Department of Education | 11,000 | $0.5 \%$ |
| Total Operating Expenditures | $\$ 2,046,000$ | $100 \%$ |
| School Facilities/Capital | $\$ 133,000$ |  |

SOURCE: State Department of Education.
called a revenue limit formula, under which the state determines a revenue limit, mandates that limit (albeit with adjustments discussed below) for all districts, and finances it with a state-controlled combination of state and local funds.

Since expenditure per pupil disparities existed prior to Serrano, and since after that the state did not bring every district to the same spending level immediately, a natural question is how "equalized" is the California school finance system. Figure 8.10 presents data to help answer this question. The data are presented by district type since the revenue limit is different for elementary, high school, and unified districts. Pursuant to a 1984 Serrano appeal court decision that allowed the $\$ 100$ expenditure band to be adjusted by inflation, the data show the percentage of students in districts with a base revenue limit that is within the inflation adjusted $\$ 100$ band above and below the statewide average revenue limit.

The data in Figure 8.10 indicate that in 1987-88, 95.6 percent of all students fall within this equalization standard and that the percentage of students within the band has been increasing steadily but slowly for each district type for each of the past five years. While similar data are not available from many other states, few states would be able to match this degree of expenditure equalization. In California, 95.6 per-
cent of all students in the state attend schools within districts that have a revenue limit within $\$ 238$ of the statewide average revenue limit.

Whatever its equalization progress, California's school finance system is unusually complicated. The base revenue limit does not determine the base revenues per pupil available to each student. The base revenue limit is subject to literally hundreds of adjustments, including adjustments for district type, school size, enrollment declines, small district transportation, meals for needy students, equalization adjustments, longer school day and year incentives, minimum beginning teacher salary incentives, 10th grade counseling incentives, caps on revenues for enrollment growth, and the like.

Tens of pages of figures are needed to determine a district's final total revenue limit, despite the seemingly simple formula structure. Few people in the state fully understand the manner in which the formula functions, and the adjustments-all with historically developed reasons-give the current system the appearance of the former federal tax code-complex and perhaps unfair. The governor's Commission on the Quality of Education is charged with making recommendations to simplify this complex formula.

In addition to its complex revenue limit formula, Califor-

FIGURE 8.10 Percent of Students Within Inflation Adjusted \$100 Band* of Base Revenue Limit by District Type

| District Type | $1983-84$ | $1984-85$ | $1985-86$ | $1986-87$ | $1987-88$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Elementary <br> More than <br> 100 ADA | $84.5 \%$ | $92.2 \%$ | $93.0 \%$ | $94.0 \%$ | $94.3 \%$ |
| High School <br> More than <br> 300 ADA | 80.3 | 86.8 | 87.1 | 89.1 | 89.4 |
| Unified <br> More than <br> 1,500 ADA | 94.5 | 97.0 | 97.0 | 97.1 | 97.2 |
| All Districts | 90.6 | 94.7 | 94.9 | 95.4 | 95.6 |

* Inflation adjusted band: $1983-84=\$ 202 ; 1984-85=\$ 212 ; 1985-86=\$ 221 ; 1986-87=\$ 227 ; 1987-88=\$ 238$.


## SOURCE: State Department of Education.

nia has nearly 70 additional categorical programs, each with a different funding mechanism. In fact, categorical funds total $\$ 3.9$ billion for 1987-88, about 18 percent of total school funding. Several of the largest categorical programs are discussed in Chapter 6; specific overall funding mechanisms are reviewed in another PACE report. ${ }^{.}$

Most of the funding formulas for the major categorical programs also are complex. For example, funding for several programs is determined by what a district received in 1978-79 (the year of the Proposition 13 bailout), with several types of inflation and, sometimes, pupil growth adjustments from then until 1988. The result is a byzantine categorical funding system. Further, the inflation or cost-of-living adjustments are almost always different from those used for the base revenue limit formula and vary, moreover, across different categorical programs.

One simple reform, borrowing on mechanisms most states use, would be to base categorical funding on the current or immediate past year number of students eligible for a categorical program service. An additional option would have the state pay all of the excess costs of providing extra services for special-needs students. Another reform would be
to move to a pupil weighting system under which all students eligible for a categorical program service would be given an extra weight indicating the amount of extra service needed, and the revenue limit formula would then be used to determine funding on a total weighted pupil basis (see Chapter 6). The governor's education commission also has been requested to make recommendations for simplifying and rationalizing categorical funding mechanisms.

## FUTURE REVENUE NEEDS

What are the Calfornia public school finance system's future revenue needs? Figure 8.11 begins to outline the dimensions of the answer to this straightforward question. The revenue needs are enormous. Using the Commission on State Finance's enrollment growth (ADA) and inflation figures, California's public schools will need an additional $\$ 1.5$ billion next year (1988-89) simply to cover an additional 120,000 students and a 4.5 percent inflation rate. This large increase would only keep the system even fiscally; it would provide for no additional reforms, no class size reductions, no new programs. It would be a "stay even" fiscal increase.

FIGURE 8.11 Projections of Revenue Requirements, 1987-88 through 1996-97

|  | Comm. on <br> State Finance <br> ADA Proj. | Increase <br> for Enroll. <br> Growth <br> (inflated \$)* | Increase <br> for <br> Inflation <br> (inflated \$)* | Increase <br> from <br> Previous <br> Year* | Increase <br> Over <br> $87-88$ | Total <br> Budget* |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $87-88$ | $4,700,500$ |  |  |  |  | Increase <br> Over <br> (987-88 |
| $88-89$ | $4,820,600$ | 560.9 | 950.8 | $1,511.7$ | $1,511.7$ |  |
| $89-90$ | $4,962,800$ | 693.9 | $1,018.9$ | $1,712.8$ | $3,224.5$ | $15.16 \%$ |
| $90-91$ | $5,142,400$ | 915.9 | $1,095.9$ | $2,011.8$ | $5,236.3$ | 24.82 |
| $91-92$ | $5,293,700$ | 801.7 | $1,028.3$ | $1,830.0$ | $7,066.3$ | 33.62 |
| $92-93$ | $5,461,300$ | $1,051.6$ | $1,297.0$ | $2,348.6$ | $9,414.9$ | 44.75 |
| $93-94$ | $5,615,900$ | $1,018.5$ | $1,527.2$ | $2,545.7$ | $11,960.6$ | 56.81 |
| $94-95$ | $5,746,600$ | 905.8 | $1,720.7$ | $2,626.5$ | $14,587.1$ | 69.26 |
| $95-96$ | $5,867,900$ | 887.8 | $2,000.1$ | $2,887.9$ | $17,474.9$ | 82.95 |
| $96-97$ | $5,980,000$ | 868.0 | $2,239.1$ | $3,107.1$ | $20,582.0$ | 97.67 |
|  |  |  |  |  |  |  |
| * in millions |  |  |  |  |  |  |

SOURCE: PACE analysis based on Commission on State Finance Annual Long-Term General Fund Forecast, Spring 1987.

For the subsequent year, 1989-90, the stay-even increase rises to $\$ 1.7$ billion. For 1991, the stay-even increase reaches $\$ 2$ billion. In fact, just to cover enrollment growth and inflation over the next 10 years, school funding will need to increase by $\$ 20.6$ billion or, as it did during the past 10 years, essentially double. These sobering figures suggest that maintaining an even fiscal keel will be a stiff challenge for California. These large sums will be difficult to garner in either political or lay arenas. Further, the Gann limit might prohibit the state from expending such sums, even if the popular political will were there to appropriate them.

These "stay even" figures ignore the fiscal consideration of suggested education system improvements. For example, California has the second largest class sizes in the nation, next toUtah. But reducing class size is expensive; it costs approximately $\$ 200$ million to reduce class size statewide by one student. So it would cost about $\$ 1$ billion to reduce class size by five students. Even if such reductions were provided only to the students and grade levels where they would most likely make a difference, an extra $\$ 1$ billion for system improvements would be hard to find.

Enacting proposals to transform teaching into a full profession, either as proposed by the Commons Commission ${ }^{8}$ or the Carnegie Forum, ${ }^{9}$ also will take additional funds. In

Rochester, New York, the board of education adopted most of these proposals, raising beginning salaries to $\$ 25,000$ and top salaries for lead teachers on a 12 -month contract to $\$ 70,000$. If California were to move along these lines, an additional \$1 billion to $\$ 2$ billion would be needed.

Finally, chapter 3 shows that student enrollment increases in California will be comprised of increasing numbers of poor, limited-English-proficient, learning disabled, emotionally handicapped, latch key, and other children-all requiring more than the usual level of education services. It is difficult to predict the level of extra money needed for such services, but iteasily could reach the $\$ 500$ million to $\$ 1$ billion level.

Thus, given current structural arrangements, enrollment growth, inflation, and an increasing number and percentage of students needing extra education services, system improvements pose an enormous revenue challenge for California public schools. It not only will be difficult to generate such revenues, but if found, as a subsequent section discusses, it will be difficult to appropriate them. While the search for mechanisms to fund these critical needs must continue, the search probably also needs to expand into new areas to find strategies to meet these education needs at more efficient cost levels.

## THE GOVERNOR'S PROPOSED 1988-89 SCHOOL BUDGET

In early January 1988, the governor submitted to the legislature a budget that proposed to increase 1988-89 education revenues by a total of $\$ 1.7$ billion, more than what is needed to keep the system even fiscally. The proposed increased would be the highest one-year increase in California's history, and perhaps the highest ever one-year increase for any state in the nation. In addition, the budget proposed a new $\$ 1.6$ billion bond issue to support school construction for rising student enrollment.

The $\$ 1.7$ billion proposed operating increase includes $\$ 977$ million new dollars from the state's General Fund and a local property tax rise of $\$ 240$ million. Lottery revenues were predicted to stay at $\$ 493$ million, the figure for 1987-88 (Figure 8.12).

Figure 8.12 Governor's Budget Revenues for K-12 Education, 1988-89 (millions)

| State General Fund | $\$ 13,556$ |
| :--- | ---: |
| Lottery Fund | 493 |
| Other State Funds | 1,262 |
| Federal Funds | 1,451 |
| Local Property Taxes | 4,049 |
| Local Debt Service | 273 |
| Local Miscellaneous | 1,433 |
| Grand Total | $\$ 22,517$ |

SOURCE: Governor's 1988 Budget.
While the bulk of the new funds were proposed for enrollment growth (of an additional 140,000 students) and inflation (a statutory 4.37 percent COLA), there were several new initiatives. These included a COLA of 4.37 percent for preschool and child care, increased funding for the Mentor Teacher Program, expansion of the School Improvement Program and summer school, a new professional and staff development program, and modifications to the California Assessment Program (CAP) including additional funds for development of new CAP tests, expansion of CAP testing to the 10 th grade, and expansion of subjects tested to include direct writing, science, and social studies.

## THE GANN LIMIT

In November 1979, Californians approved Proposition 4
(the Gannlimit) with a 75 percent vote. Gannplaces an annual limit on state and local spending. In 1980, the legislature passed Senate Bill 1352 and trailer legislation that defined the revenues subject to both state and local government limits. Limits are adjusted annually by the change in California total population and inflation. The inflation adjustment is the smaller of the U.S. consumer price index or the California personal income index. Revenues collected in excess of the annual spending limit must be returned to taxpayers.

The limit had virtually no impact on either state or local governments from 1980 to 1985, primarily because of high inflation. After the low inflation of 1986 , however, the state limit was nearly reached, and Gann provoked a serious deliberation by both state and local fiscal officials. The Gann limit began to dominate policy discussions in 1987 as continued low inflation and unexpectedly high revenues pushed the state over its limit by $\$ 1.1$ billion (see Chapter 1 ).

## Gann Impact on School Funding

Because schools receive the bulk of their revenues from state sources, the Gann limit significantly affects education funding. Costs of government usually grow faster than inflation when general inflation is low, as is the case today. This makes education revenue needs grow at a faster rate than Gann allows state spending to grow. As a result, to maintain current service quality levels education revenues can grow sufficiently only if revenues are reallocated from other functions; if that does not happen, education revenue growth is less than needed to maintain current service levels. Also, new programs can be initiated only if there are both additional revenues and, more importantly, an additional capacity to spend. Finally, reductions in federal aid to meet requirements of either the Gramm-Rudman-Hollings Act or other mechanisms to reduce the federal deficit exacerbate state and local revenue requirements because federal aid is not part of the Gann limit, but appropriating new state revenues to replace lost federal dollars is subject to the limit and is technically another form of new program initiation. In short, the Gann limit renders it difficult for California state government to fund education to support growing enrollments and inflation and even more difficult to add system reforms.

## The Local Gann Limit

School districts also are subject to a Gann limit. However, the legislative definition of school district Gann limits minimizes their impact. When a local school district exceeds
its limit, the limit can be automatically increased by notifying the Department of Finance. Thus, as long as districts follow correct procedures, their local Gann limit does not limit what they can spend.

## Possible Gann Limit Modifications

There are several options the state can invoke when more revenues are collected than can be appropriated ${ }^{10}$ :

- Provide refunds or tax cuts. This option was chosen in 1987.
- Recalculate the limit. Even under current law, the Department of Finance and Legislative Analyst have different views of the revenues included in the limit. It would be possible to expand the Gann limit by new statutory definitions of revenues included and excluded.
- Prepay state debt. State appropriations to retire voter-approved debt or debt incurred prior to 1979 are exempt from the limit. Prepaying debt would reduce debt service, which totaled nearly $\$ 600$ million in 1987, and allow use of that money for other purposes.
- Provide tax incentives. Tax incentives or credits are fiscal mechanisms that can further policy goals without direct revenue appropriations, and thus they are beyond the Gann limit. Exempting school districts from the sales tax, a school construction tax credit, or giving income tax relief to teachers are ways to support schools with tax incentives outside the reach of the Gann limit.
- Increase unrestricted subventions to local governments. Unrestricted aid to local governments, including schools, is also not subject to the Gann limit.
- Defer tax collections. The legislature could defer tax collections in a year the state expects to exceed the limit and defer those collections until revenues could fall within the limit.
- Propose limit overrides. By simple majority in a statewide election, the state limit can be increased for up to four years.
- Modify the limit. By simple majority in a statewide election, the Gann limit can be changed permanently. There are several current attempts underway in both the legislature and the initiative process to use this option. Most are directed at expanding the limit
by changing the inflation index (to the growth of personal income) or the population growth definition (to focus more on service populations) or by removing certain taxes (such as the gas tax) from the limit.


## Conclusion

Absent Gann modifications, state and local governments, especially schools, will be hard pressed to increase expenditures to maintain current service levels. As discussed above, schools need substantial new dollars just to cover inflation and provide services to a rapidly increasing student population.
${ }^{1}$ In this instance, ADA is higher than total enrollment of 4.4 million because it includes summer school, adult education, ROC/P, and county offices not included in the fall enrollment count.
${ }^{2}$ Includes all General Fund, special funds, and capital outlay.
${ }^{3}$ The GNP deflator for state and local government purchases.
${ }^{4}$ Figure 9.7 uses the most recent data for each category of information.
${ }^{\text {s }}$ The National Education Association and California definitions of average daily attendance (ADA) are different. California's ADA, which includes excused student absences, is more like NEA's average daily membership (ADM). Thus, according to the State Department of Education, estimated 1988 figures put Califormia's expenditure per ADA at $\$ 3,961$ below the NEA national average of $\$ 4,125$. But when the California ADA figure is adjusted to reflect its inclusion of excused absences, the estimated expenditure per adjusted ADA is $\$ 4,199$ just above the NEA national average of \$4,150.
${ }^{6}$ Cagampang, H., et al. 1986. Teacher Supply and Demand in California: Is the Reserve Pool a Realistic Source of Supply? Berkeley, CA: University of Califormia, Policy Analysis for California Education (PACE).
${ }^{7}$ Allan Odden. 1987. The California School Finance System, 1986-87, Berkeley, CA: University of California, Policy Analysis for California Education (PACE).
${ }^{8}$ Who Will Teach Our Children?
${ }^{9}$ Teachers for the 21st Century
${ }^{10}$ California Tax Foundation, Up to the Limit, Artical XIIIB, Seven Years Later (Sacramento, CA: California Tax Foundation, March 1987.

## chapter 9

# Special Feature: How State Education Reform Can Improve Secondary Schools 

Much of the reform activity described in previous chapters was initiated by Senate Bill 813, a comprehensive bill containing dozens of education reform provisions. The scope of SB 813 's changes and the activity generated from its momentum had no previous parallel. The bill's many ideas for school improvement, if implemented, potentially could alter the curriculum and instructional practices of virtually every school in the state. However, despite the bill's sweeping scope, and large accompanying revenue increases, it included neither a proven effective reform philosophy nor a cohesive school change strategy.

Many of Senate Bill 813's provisions could be linked logically to school improvement. Nevertheless, a question remained as to whether districts could implement them in a systematic manner. Also, little was known about the interactive effects of such a large number of reform ideas being enacted simultaneously. Could local school districts and schools cope with this level of complexity? In short, after all the excitement of enactment, could local districts weld together Senate Bill 813 's disparate provisions into a coherent and forceful set of tools for school improvement?

Senate Bill 813 was enacted in July 1983. Now four-and-a-half years later, an assessment of the condition of education in California must examine how schools have adapted to reform initiatives. PACE undertook a study to understand how selected California schools reacted to state school improvement inducements and mandates. ${ }^{1}$ Specifically, the study assessed whether or not reform components contained in Senate Bill 813 could contribute to school improvement, and, if so, how. Its purpose was not to judge the overall effectiveness of SB 813 but rather to understand if a number of state-level education reform features could be implemented locally and shaped into effective instruments for

## HIGHLIGHTS

Finding \#1. Virtually all schools studied implemented key Senate Bill 813 education provisions in a manner consistent with state purposes.

- In all of the sample districts, SB 813's increased high school graduation requirements were implemented. In many locations, this was already underway at the time SB 813 was enacted.
- Senate Bill 813 's required model curriculum standards have been included in district guidelines at two-thirds of the high schools in the study sample and incorporated into actual subjects in half the schools.
- The combination of additional funds provided by SB 813 and new curriculum standards resulted in the selection and purchase of new, more rigorous texts in a majority of sample schools.
- The California Assessment Program (CAP) is receiving greater attention and use in most of the sample schools. It is used to assess educational progress, to pinpoint problem areas, and to modify curricula.
- All sample schools implemented the longer school day and year-this having been started in many districts before the passage of SB 813 .
- All sample schools implemented the 10 th grade counseling program.
Finding \#2: Senate Bill 813 reform provisions can be effective when woven into a cohesive school change strategy at the local level.
- The study's sample schools show that local education leaders can weave the fragmented continued
components of SB 813 and related state initiatives into a cohesive program of local school change that, when implemented effectively, can improve schools.
- In many sample districts, both commitment to major reform and many concrete efforts to bring it about were underway through local initiation before SB 813 . However, research teams concluded that SB 813 's legislative force and fiscal resources were crucially important, and without them, many local reform efforts might have foundered.
- In sample schools and districts, SB 813 raised teachers' and administrators' commitment and efforts to improve the quality of education. In these schools generally, SB 813 's combination of rigorous new standards and added resources produced a renewed determination to upgrade education.
- Most sample districts and schools placed renewed emphasis on curriculum and instruction issues, education's core activities.
- Districts tended to centralize curriculum and instruction improvement and to move beyond formal state curriculum program implementation into broader curriculum upgrading.
- Districts developed districtwide K - 12 curriculum scopes and sequences that aligned curriculum objectives with new textbooks, state model curiculum standards, local tests, and state CAP tests.
- New academic courses represented substantive academic rigor and not relabeled or watereddown versions of old courses.
- Many schools developed new emphases in reading and writing across curriculum content areas, and required more mathematics and science for the average student.
- Most schools implemented programs designed to improve student CAP test scores.
- Most districts implemented staff development programs to strengthen teachers' instructional strategies.
- Sample districts did not view SB 813 as onerous or requiring unreasonable paperwork.
Finding\#3: Successful local reform implementation exhibits several key themes.
- District leadership was important both in initiat-
ing local reform action and in supporting, over several years, full reform implementation.
- District leaders transformed disparate SB 813 elements into integrated district reform visions that retained the state's academic and intellectually demanding orientation and tailored them appropriately to local priorities.
- Schools added to this district vision a school focus on an improved learning environment, including heightened concern for all students and teacher collegiality.
- Teacher and site administrator participation in designing specific implementation activities balanced top-down district and state reform implementation. School and district "teaming" in ongoing reform implementation helped integrate school and district visions and activities.
- Staff development combined with follow-up assistance in schools and classrooms produced the most improvements in teachers' and administrators' professional expertise.
Finding \#4: Attention to both the substance of curriculum and instruction and the process of school change are associated with higher test scores and better learning conditions for students.
- Student CAP scores in the sample schools increased more than the statewide average. Further, CAP scores rose for all students, those at the bottom, those in the middle, and those at the top.
- Senate Bill 813 changes in particular and the broader reform effort in general had more influence on sample high schools than sample middle schools probably because SB 813 's provisions are directed more specifically at the high school.
- Students in the sample schools are now subject to more rigorous and academically oriented educational expectations.
- Administrative expertise and practice in the sample schools improved. Administrators were more able to design and implement a strengthened program of instruction, manage a reform process, and supervise instruction.
- Teachers sense of professional efficacy increased.
- Sample schools improved as institutions. They had clearer plans and stronger norms of teacher collegiality.
continued

Finding \#5: Students with special learning needs-the poor, remedial, limited-English-speaking, and at risk of dropping out-received increased services, but the services were of a type that produced insufficient levels of academic achievement in the past. Sample schools lacked sufficient strategies for mounting more effective interven-
tions for at-risk students.
Finding \#6: Sample schools desired to engage in more complex school improvement, including a curriculum focused on problem solving and hig her order skills, but were searching for more effective strategies and assistance to do so.
enhancing the productivity of schools.
A sample of 17 secondary schools was selected- 12 high schools and 5 middle or junior high schools. ${ }^{2}$ The selection process produced schools that reflected the geographic and urban-rural diversity of the state and the cultural and ethnic diversity of secondary students in California. Research teams studied specific districts and schools, collecting data at several different times during the 1986-87 school year and spending a total of at least 11 days in the field for each school. Research teams collected documents and other data reflecting school and district activity, interviewed dozens of individuals at the district and school levels, and observed the interactions of education professionals among each other and with students at both the district and school levels.

State agencies played a major role in improving these schools, but with the caveat that state initiatives interacted with local efforts that often were launched prior to SB 813. "SB 813 didn't cause the reform," said one local superintendent, "but it sure helped." In the view of many local respondents, the state (1) increased the momentum and continuity of local reform, (2) provided critical technical assistance to districts and schools, (3) monitored and reinforced successful performance, and (4) provided useful direction and materials such as increased high school graduation requirements, new CAP tests, the mentor teacher program, model curriculum standards, and the new state curriculum frameworks.

## IMPLEMENTATION OF SB 813 POLICIES AND PROGRAMS

The study examined the local implementation of several key SB 813 policies and additional state initiatives. This section summarizes and synthesizes study findings about how the following policies and programs fitted together and operated in local districts:

- increased high school graduation requirements
- model curriculum standards
- textbook selection criteria
- new state CAP tests, especially the 8 th grade CAP
- mentor teacher program
- certification for teacher evaluators
- additional staff development for teachers and administrators
- 10th grade counseling program
- California's school improvement program
- homework policy
- longer days and years
- quality indicators


## Increased High School Graduation, CSU, and

 UC Entrance RequirementsEffective in the 1986-87 school year, SB 813 mandated new statewide requirements for graduation from high school. The State Board of Education developed even more rigorous standards, though they only bore the weight of recommendations, not mandates. These entrance requirements are given below. Numbers refer to years.

## Study Findings-Graduation Requirements

- All sample districts increased high school graduation requirements to the SB 813 minimums.
- Most sample districts increased high school graduation requirements in anticipation of the SB 813 mandates. The effective dates of increased requirements often fell immediately prior to SB 813 timelines.
- English and mathematics requirements in sample districts generally fall above SB 813 mandates, but slightly below state board recommendations.

FIGURE 9.1 High School Graduation and University Admission Requirements and Recommendations

| Subject | SB 813 <br> Requirements | State Board Recommendations | $\begin{aligned} & \text { CSU Required } \\ & 1988 \end{aligned}$ | $\begin{aligned} & \text { UC Required } \\ & 1988 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| English | 3 | 4 | 4 | 4 |
| Math | 2 | 3 | 3 | 3 |
| Algebra | - | (1) |  |  |
| Geometry | - | (1) |  |  |
| Science | 2 | 2 | 1 | 1 |
| Physical | (1) | (1) |  |  |
| Life | (1) | (1) |  |  |
| Social Studies | 3 | 3 (this | may be taken as | ear of |
| World Civ. | (1) | (1) U.S. | History or .5 year | History |
| U.S. Hist. | (1) | (1) and. | year Civics or | ican Govt.) |
| Ethics | - | (.5) |  |  |
| Am. Gov. | (1) | - |  |  |
| Economics | - | (.5) |  |  |
| Foreign Lang. | 1 | 2 | 2 | 2 |
|  | (or Fine Arts) | (in same language) |  |  |
| Fine Arts |  |  |  |  |
| Computer | - | (.5) |  |  |
| Studies |  |  |  |  |
| Physical Ed. | 2 |  |  |  |
| Electives |  |  | 3 | 4 |
| Note: Subsequent legislation has mandated 0.5 year of economics for high school graduation. |  |  |  |  |

## Model Curriculum Standards

To assist local school districts in upgrading course content, SB 813 required the State Department of Education to develop model curriculum standards for the mandated graduated requirements. School districts were required to compare their local curriculum to the model standards at least once every three years. The model curriculum standards were intended to serve as a model, not a mandate. The standards have been designed to allow boards as much flexibility as possible in making comparisons, and in implementing strategies and details. The content that should be covered by the
time students have completed, for example, three years of English, is clear in general terms but can be accomplished in a variety of ways. Model curriculum standards have been developed for grades 9-12 in the following subject matter areas:

- English and Language Arts
- Foreign Language
- History and Social Science
- Mathematics
- Science
- Visual and Performing Arts


## Study Findings-Model Curriculum Standards

- Model curriculum standards were compared, as required by SB 813 , to district curriculum guides in 11 of 12 high schools and 4 of 5 junior schools.
- The content of model curriculum standards in most subjects has been included in district guidelines at 8 out of 12 sample high schools.
- When incorporated in the curriculum guides, model curriculum standards have resulted in a stronger emphasis on higher order thinking skills,writing, and reading across content areas.
- The impact of model curriculum standards on changes in course content in the classroom has been low.
- Only 6 of 12 sample high schools claimed to have incorporated model curriculum standards into the subjects as actually taught in the school.
- Model curriculum standards have had minor impacts on curriculum change at the junior high or middle school levels.
- Teachers frequently stated that model curriculum standards are difficult to implement; they include too many topical subjects and are difficult for some groups of students.
- Model curriculum standards appear to be an effective beginning step to major curriculum reform. Model curriculum standards are stimulating districts to strengthen and deepen curricula and accelerate the pace of instruction. The new standards are operating at the district level. Such is not always the case for the new curriculum in classrooms.


## Changes in Textbooks Adopted

California high schools, grades 9-12, adopt textbooks based on their own district policies. Textbook selection for a given subject occurs every six years. During the year of the study, texts were being selected for science, social studies, English as a Second Language (ESL), English, and economics.

Junior and middle schools must select texts from a stateadopted list when purchasing them with state textbook funds. Recently, the state began to require publishers to cover content in greater substantive depth, to include higher-level skills as well as basic content and knowledge skills, and to cover in an objective manner some controversial topics.

## Study Findings-Text Selection

- Almost all sample schools select texts by using teams of teachers, administrators, and central office personnel. Once these teams develop a list of texts, individual teachers frequently suggest which books from this list should be purchased.
- Alignment of texts with district curriculum and tests is effective at both the junior and senior high school levels in the study sample.
- Nine of 12 sample high schools and all junior highs write curriculum before selecting texts. One high school selects texts prior to writing curriculum.
- Sample districts are aware of the need to upgrade texts, so there have been changes regarding better texts, more difficult texts, and the inclusion of higher order thinking skills.
- Texts, along with model curriculum standards and tests, are a key link to curriculum changes.
- Teachers in sample schools are using new texts in their courses.


## CAP and Other New Tests

Statewide testing of all California 3rd, 6th, and 12th graders has been conducted since 1973. The California Assessment Program (CAP) provides achievement information on school and district levels, not for individual students. This testing program uses questions specifically designed to match California's school curriculum. The 8th grade test includes reading, mathematics, writing, science, and social
studies. Currently, only reading, mathematics, and written language are assessed in the 3 rd , 6 th, and 12 th grade tests. Future tests for these grades also will include writing samples, as well as science, history-social science, and critical thinking across all content areas. The current 12 th grade reading and mathematics tests have recently been revised, are now more aligned with model curriculum guides, and will be administered in December 1987.

## Study Findings-Tests

- CAP reading scores rose in all sample high schools and in 4 out of 5 sample junior high schools; CAP mathematics scores rose in 10 of 12 high schools and in 4 out of 5 junior high schools. Average CAP score gains in both reading and mathematics rose above statewide average increases for both the high schools and the junior high schools.
- Statewide testing strongly influenced curriculum change in sample schools.
- All sample schools were sensitive to the importance of CAP tests to school and district public image.
- CAP drove sample school curriculum changes by emphasizing higher order thinking skills, writing, and science.
- Most sample junior and senior high school personnel were aware of the new 8th grade CAP, with its emphasis on problem-solving application and higher-level thinking skills. Most were also aware of the new 8 th grade direct writing assessment. Most high school personnel were aware that the 12th grade CAP will change drastically in December 1987 when the new version will be given.
- Eight of 12 sample high schools and all 5 junior high schools specified that the CAP had a high or medium influence on their school "vision."
- Some degree of testing review is conducted for students at 8 of 12 sample high schools and 2 junior highs. Schools are becoming more sophisticated about tests. Students are being taught how to take tests, tests are being integrated into the curriculum, specific test content review often is provided, and schools are striving to increase students' test scores.


## Mentor Teacher Program

The Califormia Mentor Teacher Program provides statefunded stipends for up to five percent of classroom teachers in California. In order to qualify for a stipend, a candidate must be a credentialed, permanent classroom teacher, have recent teaching experience, and have demonstrated exemplary teaching ability.

A selection committee, composed of a majority of classroom teachers, nominates candidates for mentor positions. Candidates are selected by the school board from those nominated. Mentors receive a $\$ 4,000$ stipend above their regular salary for performing any of the following duties, as determined by the district:

- Provide assistance and guidance to new teachers (a mentor's primary function)
- Provide assistance and guidance to more experienced teachers
- Provide curriculum development

The only restrictions placed on mentors are that they must spend at least 60 percent of their time "in direct instruction of students" and they may not formally evaluate other teachers.

Districts are provided funds for other support costs associated with the program. In the 1983-84 and 1984-85 school years, districts received $\$ 2,000$ per mentor to cover these costs.

## Study Findings-Mentor Teacher Program

- Mentor selection processes varied in sample districts and schools but generally included application, interview, and observation.
- Mentor programs were affected by labor issues, and the necessity to bargain terms and conditions delayed or altered implementation in some sample schools.
- "Mentor" designations at times influenced teacher collaboration negatively rather than extending peer interaction.
- Mentors were used primarily for curriculum development and secondarily to provide assistance to both new and experienced teachers.
- Assistance provided to teachers was on a voluntary basis.
- Generally, mentor deployment had not been heavily coordinated with local school reform or change efforts promoted by the state.
- Administrative support and direction at both sample districts and schools appears to be a factor in mentor success and use. Although districts provided little training and assistance to their mentors, when it was provided, it was generally in the area of clinical teaching and helped improve mentor activities.
- Reliance upon mentors by staff was low, in part due to lack of clarity regarding roles. Administrative knowledge and support of mentors seemed to increase visibility and usage.
- The $\$ 2,000$ per mentor administrative stipend was frequently employed to provide release time for mentors, money for mentors to attend conferences and workshops, and to purchase materials and supplies.


## Certification of Teacher Evaluators and New <br> Teacher Evaluation Systems

SB 813 required teacher evaluators to be certified in a set of newly identified competencies. In order for school districts to receive school apportionments from the State School Fund, on or before $12 / 1 / 84$, they had to adopt regulations establishing the certification of personnel assigned to evaluate teachers. Teacher evaluators needed to demonstrate competence in instructional methodologies and evaluation for the teachers they were assigned to evaluate. Personnel were to be competent in the following areas:

- Instructional leadership-the ability of an administrator to provide educational as well as managerial direction
- Curriculum knowledge of the content, structure, scope, and sequence of what students are being taught
- Instruction-knowledge of how students are taught, including multiple teaching methodologies to reflect multiple learning styles
- Assessment-what students are learning, the ability to use data to establish performance standards and make program decisions
- School climate-the ability to create and sustain supportive and appropriate learning environments for students and school staffs
- Staff development-knowledge of and commitment to assessing and providing staff development tied to district curriculum, instructional priorities, and teacher needs
- Supervision-knowledge of and ability to supervise teachers through observation conferencing, and staff development, as well as professional responsibilities to evaluate teaching performance.
- Evaluation and documentation-ability to use state laws, district policies, contract provisions and appropriate supervision techniques to recognize superior performance and to correct poor performance.
In addition, administrators needed to know district procedures for diagnosing student needs, how the instructional program met those needs, and how assessment data were used to support revisions in instruction. An effective teacher evaluation system is built upon local needs and services, and the administrator should have a strong ability to motivate staff and supervise instruction, as well as evaluate teaching performance.


## Study Findings-Certification for Teacher Evaluators

- Fifteen of the 17 sample schools trained all administrators in teacher evaluation. One indicated that new principals were trained as they came on board, implying that all were trained.
- Ten of the 17 schools offered medium-intensity training, which might include an initial training session with an annual review. Two schools had low-intensity, "one shot" training. The four instances of high-intensity training offered follow-up and, in some cases, observation and peer coaching of the evaluation process.
- In 5 cases, training was provided by the district alone; 1 was provided by outside consultants alone, and 10 were provided by a combination of district resources and outside consultants. There appeared to be no relationship between the intensity and delivery system of the training.
- Fourteen sample schools specified the use of a clinical supervision model.
- Eight of the 17 schools reported some type of follow-up activity for the training. Nine did not mention follow-up.
- Fourteen of the schools indicated that the principals were supervising in the manner in which they were trained; 3 were not.
- Five senior high schools and five junior high schools indicated that their method of teacher evaluation was not new since SB 813. Most of these schools stated they had been satisfied with the quality of their teacher evaluations for some time.
- Seven schools indicated that the districts had done the training and that was all. Three reported that the reform was a major impetus for launching an administrative training program. Seven stated that reform had had no impact in that they had a good evaluation system for some time.


## Other Local Staff Development for Teachers and Administrators

The study also gathered information on other local staff
development activities. Senate Bill 813 mandated that teachers hired after September 1985 receive 150 hours of staff development every five years.

## Study Findings_Staff Development for Teachers

- There is a widespread base of training in clinical teaching and clinical supervision on which future staff development activities can build. Staff development focused on improving instruction, and administrator supervision of instruction has become standard procedure in many sample schools. This base of staff development could be "exploited" as more content and grade-specific staff development focuses on implementing the model curriculum standards, the new state frameworks, and CAP tests.
- Staff development generally took the form of formal inservice training.
- The most common themes in sample schools for staff development were clinical teaching, curriculum content, general pedagogy, and classroom management.
- Participation in staff development activities that promoted district-wide pedagogical and clinical teaching activities was most often mandatory. Participation in additional staff development activities was often voluntary.
- When they existed, mentors were frequently used as part of the district's staff development program.
- There was greater use of district or local trainers as compared with reliance on outside consultants.
- County offices appeared to be only infrequently utilized as a resource.
- Follow-up coaching was limited.
- The extent to which new instruction techniques explained in staff development are actually used in the classroom is unclear.


## Study Findings-Staff Development for Administrators

- All principals and most administrators received some type of staff training.
- Of the 17 sample sites, 5 had mandatory training, 8 had a combination of mandatory and voluntary training provided. Seven sites used a combination of district and outside consultants for training.
- Fourteen sites indicated that training was done by the district; at four sites this was the only training provided. Seven sites used a combination of district and outside consultants for training.
- Nine sample sites were using administrative training centers as part of their training program. Three sites were using county resources.
- At the junior highs, the method of training was equally provided through meetings, conferences, and inservice training sessions. At the high schools, all three methods were also used, but meetings, both formal and informal, were relied upon more heavily.
- The intensity of administrative staff development was analyzed by researchers as follows: seven showed low intensity, five medium, and four high. The other sites did not provide sufficient information to gauge the intensity of the training.
- Six sites indicated that follow-up coaching was provided to administrators.
- Sixteen of the 17 sample sites indicated that clinical supervision was at least one, often the only, purpose of administrative training. This policy is linked tightly to teacher evaluations. Ten provided training in curriculum and instruction. Other popular topics were effective schools, district reform goals, and leadership.


## School Improvement Program

California's School Improvement Program provides aproximately $\$ 85$ per student to schools in the program to develop and implement a school site-defined education improvement program. A School Improvement Program Quality Review is conducted every three years to evaluate each school's program. Until recently, the review was conducted by State Department of Education monitors, and it emphasized program services for special-needs students. In 198384 , the program quality review guides were changed and the program quality review function was decentralized to the
local level. Now, program quality review focuses on the quality of a school curriculum program and the degree to which categorical services for special student populations reinforce the core, curriculum program. These changes specify in more detail the substance of local School Improvement programs and signal that School Improvement can be used as a program for implementing curriculum change in response to education reform mandates. Further, consortia of local educators now conduct program quality reviews, thus removing the state from the local review process.

## Study Findings-School Improvement Program

- A majority of schools in this study did not receive School Improvement funds.
- Three sample high schools participating in the School Improvement program indicated a high influence of the program on reform.
- School participating in the School Improvement Program had a process for engaging in efforts to improve the school and knew how to develop a long-term plan, and SB 813 gave them a more focused direction.
- The two schools using Achievement Council assistance reported a high impact on the school's reform efforts, in general ways similar to a school improvement program.
- The focus of School Improvement at the high schools was generally on staff development, computers, and raising the quality of education for minority populations.
- The focus of School Improvement at the junior high schools was on staff development and raising test scores.


## Homework Policies

SB 813 required each district to develop a homework policy.

## Study Findings-Homework Policy

- Seven districts had developed a homework policy. In addition, three high schools and two junior highs also had individual site policies.
- There has been little or no effect in sample schools of the homework policy related to school reform efforts.
- It appears difficult for districts or sites to enforce homework policies.
- Homework practices seem to be a classroom teacher responsibility, difficult to affect by district policy.
- There was a general sense that the amount of homework being assigned by teachers had increased in the past four years, but more as a result of a new national atmosphere of "academic orientation" and not because of new district homework policies.


## 10th Grade Counseling

SB 813 provided a program for districts to establish a comprehensive program of counseling for pupils reaching the age of 16 , or for pupils prior to the end of the 10th grade, whichever occurs first. The counseling program must review a pupil's academic progress and educational options and
design an academic program that would lead to high school graduation. Districts were eligible to receive $\$ 20$ per 10th grade pupil for counseling services provided in 1983-84 and in 1984-85 for services which supplemented, but did not supplant, existing services.

## Study Findings-10th Grade Counseling

- A 10th grade counseling program was implemented in all 12 sample high schools.
- The focus of counseling is college preparation, dropout prevention, and high school course planning to ensure graduation.
- Parents are involved in the counseling provided at most of the sample high schools.
- Counselor-student ratios varied from 1:71 to 1:440.
- Four sample schools extended the program to the 9 th grade, and one received permission to implement the program in 8th grade.
- No pattern was found in the manner in which the counseling money was used.
- Students are generally counseled once a year, one school was providing counseling twice a year.
- This policy was fully implemented in all sample schools; however, the quality of the program is mixed.


## Longer School Day and Longer School Year Incentives

In 1984-85, districts operating school for at least 180 days were entitled to an additional $\$ 35$ per unit of average daily attendance (ADA), exclusive of adult ADA and summer school ADA. Thereafter, districts needed to maintain the 180 day instructional year in order to retain the financial bonus.

Based upon the number of instructional minutes offered in 1982-83 and instructional minutes offered in 1983-84, districts received a bonus of $\$ 20$ per ADA in grades $\mathrm{K}-8$ and $\$ 40$ per ADA in grades 9-12 for each of three years if they increased the number of instructional minutes one third of the distance per year toward, or met and maintained, the follow-
ing goals:

- 36,000 annual minutes in Kindergarten
- 50,000 annual minutes in grades $1-3$, inclusive
- 54,400 annual minutes in grades $4-8$, inclusive
- 64,800 annual minutes in grades $9-12$, inclusive

Schools had several options for increasing the school day or year. Some examples include:

- adding a homeroom where none previously existed
- increasing the passing time between class periods
- increasing the minutes of each period
- increasing the number of school days in the year.


## Study Findings-Longer School Day and Longer School Year

- Several sample schools had begun the process of lengthening the day prior to SB 813.
- Where there were previous cutbacks in the day and year, the lengthening resulted in major effects at the school level.
- The biggest change seems to be the addition of a sixth period and more days in a year.
- Some sample schools increased the day beyond the minimum required.the cases in which entire additional periods were added.
- The impact of the longer day and year on school reform was at best modest, except for the cases in which entire additional class periods were added.
- Most schools stressed the advantage of the extra money they received by complying with the minimum school day and year requirements.


## Quality Indicators

The first phase of the state's "quality indicators" accountability program was to identify the measures against which educational progress will be judged and to establish goals for statewide improvement. A comprehensive set of accountability measures was developed which include the following state quality indicators:

- increased enrollment in mathematics, English, science, history and social studies, foreign language, and fine arts
- improved statewide CAP test scores
- reduced dropout rates and increased student attendance rates
- increased performance of the college-bound student on the SAT and AP exams
and College Board achievement tests
Statewide targets for improvement through 1990 were established for each quality indicator. The accountability program also asked districts and schools to establish their own
local targets and improvement strategies to help meet the state goals. Such local quality indicators could draw on a larger body of evidence and address:
- strength of the school's curriculum, describing what is being taught and how well students are learning what they are being taught
- amount and quality of writing assignments completed by students
- amount and quality of homework assignments completed by students
- number and types of books read by students
- support the school receives from the community and parents
- awards and recognition received by the school, its teachers, and students
- nature and quality of support the school provides students with special needs
- participation by students in extracurricular activities


## Study Findings-Quality Indicators

- Eight sample high schools and four junior highs had developed local quality indicators. Of these schools, the influence of these indicators on reform varied: high (4), medium (4), low (3), none (1).
- The impact of the state's quality indicators on school reform varied: high (3), medium (6), low (4), none (4). There was a substantive impact in all but one high school and in all but one junior high school, including increased attention to test scores, AP courses, and dropouts.


## IMPLEMENTATION PHASES

Districts in the study tended to initiate and implement educational reform in a series of phases. The first phase was the immediate concern of the SB 813 legislation-more rigorous high school graduation requirements and a longer school day and year. The second phase can be characterized as re-establishing an "academic orientation" in secondary schools and included upgraded curriculum standards, new and better textbooks, new and more difficult tests, mentor teachers, more administrator supervision of instruction, and expanded school accountability through the use of so-called "quality indicators." The more recent third phase focuses on revised curriculum and instruction that emphasizes thinking and problem-solving skills, inquiry-oriented history and geography, more mathematics and science, and integration of writing assignments across content areas. This third phase has been incorporated into California's new 8th grade CAP test and several recent state curriculum frameworks; it will be included in the state's revised 12th and 6th grade CAP tests.

For the first two reform phases, the major SB 813 policies and programs were at an advanced stage of implementation in nearly all schools studied. Sample districts increased high school graduation requirements and upgraded curriculum standards. While schools in the study were selected because they had increased student enrollments in academic courses, the study confirmed that these courses were not "watered down" or relabeled versions of old courses. Instead, they represented legitimate academic content-a substantively more demanding curriculum. Districts also lengthened the school day and year, purchased new and better textbooks, administered new and more difficult state tests, created a cadre of mentor teachers, raised teacher salaries, and expanded accountability by developing Quality Indicators, all during the past four years. These actions constituted the core of the education reform in California.

## IMPROVING THE CURRICULUM AND ENHANCING INSTRUCTION

The state, through SB 813 model curriculum standards, state curriculum frameworks, and CAP tests, helped sample districts clarify and coordinate curriculum elements such as goals, texts and other instructional materials, instructional strategies, and tests of student progress. This is often called "curriculum alignment," and the elements constitute the technical core of a school's curriculum and instruction program.

Sample schools and districts did more than simply imple-
ment SB 813 curriculum initiatives. They used them as a springboard to engage in comprehensive curriculum upgrading. New district K-12 curriculum "scopes and sequences" were created, new academic courses were developed particularly in mathematics and science for the average student, new cross-content emphases were begun such as reading and writing across the curriculum and new interest emerged for thinking and problem solving skills.

One of the most powerful state influences on the technical core of sample schools was the CAP testing program. State CAP tests were driving local curriculum change. While the older versions of CAP produced a curriculum focused on basic skills, the new CAP tests, especially at the 8th grade level, are promoting a curriculum with more subjects and greater attention to problem solving and other higher level thinking skills. Moreover, there were many positive examples of how the CAP test was helping districts and sites make curriculum improvements and stimulate reconsideration of local curriculum in light of the focus of the state tests, especially the new 8 th grade CAP.

The study found that the sample school systems were actively involved in a wide array of staff development activities, some spawned by SB 813 and others locally initiated. Workshops of short duration with limited or nonexistent follow-up coaching typified most staff development. Moreover, staff development often had an inconsistent relationship to the overall reform direction, although many districts had plans to strengthen this role for staff development. The study also found considerable local awareness in sample districts about generic (i.e., clinical teaching) versus content-specific teaching strategies, and the districts' disposition now was to build upon the generic base and move into more contentspecific training in order to help implement the goals of the new state curriculum frameworks.

While mentor teacher programs were formally operational in most sample districts, many were only loosely linked to the overall school reform efforts and usually provided services to volunteers, few of whom were experienced teachers. Many sample districts, however, had plans to shift mentor roles towards greater integration with overall reform implementation, and mentors appeared to welcome this change.

## CRITICAL FACTORS FOR IMPROVING SCHOOLS: THE LOCAL IMPLEMENTATION PROCESS

Successful local education reform implementation had several important themes in sample districts. First, district
leaders transformed the state technical core of curriculum and instructional elements into integrated, district visions of reform. District leaders used the state curriculum and instructional elements because they believed that these represented important and substantively sound content. They also assumed ownership of the reform process because they had themselves initiated similar, though limited, actions before SB 813. Further, district leaders tailored the state reform to local needs and priorities without destroying its essence. The content of the resulting local vision was a more integrated, substantively rigorous, technical core of curriculum and instruction than districts had prior to 1983, and included a greater academic orientation than previously had been the case. District leadership, in other words, was important. District leaders established the reform vision for the sample districts.

The second theme is that the new district academically oriented and intellectually demanding curriculum was balanced at the site by a complementary school vision that often emphasized an intense concern for students' self-esteem, teacher collegiality, and overall social responsibility. The school vision often matched the demographic characteristics of local school environments and made the more academically demanding district program possible to implement. This finding fits with the strong role of school climate displayed in other effective secondary school research.

The third theme is that the reform tended to be initiated in a top-down manner, characterized by increased district centralization of curriculum development and textbook selection yet coupled with extensive site-level teacher and administrator participation in implementation. Districts and schools seemed to be "teaming" in reform development and implementation. New and instructionally oriented superintendents and principals played key roles in reform initiation in most districts and schools. Department chairs also played key roles and were becoming more critical to implementation at the site level. Moreover, it was important that the district leadership role not just be "upfront" in proposing the directions for the reform, but continue throughout the entire implementation process in the form of continuing coordination, leadership, pressure, and monitoring.

The final overall theme is that successful state reform implementation in sample schools hinged on a closely aligned vision between the district and schools, and between teachers and administrators in schools. Higher gain schools, according to ratings of the case researchers, were in districts in which the district reform vision was clear and consistent, where district leaders were both highly committed to educational reform
(especially to improving basic skills), strong in communicating this commitment to schools, and where schools were moving in the same direction and with the same substantive agenda as the district.

All sample schools, except one junior high school, conducted an effective local implementation process. Every school in the study used some form of "cross-role teaming." Cross-role teams typically were groups that included teachers, department chairs, and site and central office administrators, and were charged with designing and coordinating the implementation process. Cross-role teams blended top-down initiation of the reform direction with bottom-upparticipation in developing and implementing specific implementation activities and helped produce a closely aligned vision and agenda among teachers, administrators, schools, and districts.

Administrators and teachers in sample schools received initial training to carry out reforms and undertake curriculum development activities. When coupled with administrator leadership, commitment, monitoring and pressure to implement, these initial trainings and corresponding curriculum development activities were sufficient to implement the early phase of revitalizing an academically oriented curriculum.

More substantial changes in curriculum and instruction, beyond the two above-mentioned stages, took increased and continuous amounts of assistance. For site administrators, this assistance often focused on clinical supervision, teacher evaluation, and classroom management strategies. For teachers, this assistance often focused on clinical teaching, classroom management, and general pedagogy. For most sites, however, the quality and extent of assistance was sufficient neither to change dramatically classroom teaching skills nor to support the implementation of the even more demanding curriculum reforms that include thinking, problem solving, communication skills, and cooperative learning.

## STUDENT, PERSONNEL, AND SCHOOL OUTCOMES

In addition to assessing the status of SB 813 policies in 17 secondary schools, study findings include several outcomes for students, teachers, administrators, and schools as organizations; analyses of key variables in effective local implementation processes; and the linkage of special-needs student programs to reform implementation. A number of the outcomes are based on ratings by case researchers, and represent their judgments about the impact and effects of SB 813.

Schools in the sample made substantial gains between 1983-84 and 1986-87 in student achievement, as measured by

CAP score gains. Moreover, schools also made gains in school climate, administrator practice, teacher practice, and nontest-score related student variables according to researchers' ratings. Moreover, individual schools made sizeable gains in all of these areas. CAP gains, for example, did not occur at the expense of other outcomes. Further, test score gains were not caused by favorable student or school demographic characteristics.

CAP scores for schools in the sample rose faster than scores statewide, especially in reading. For the sample generally, student 8th and 12 th grade CAP test scores increased between 1983-84 and 1986-87. In these high schools, reading gains were double the statewide average. In addition, test scores rose across the range of all students in these schools. There was an increase in students scoring above quartiles 1,2 , and 3 over these three years, which means that students at all levels improved their performance. It was not only the highest performing students who improved their scores; students across the spectrum improved their performance.

School "climate" in the schools studied improved substantially. Based on researcher ratings, school climate improved across several dimensions, including shared sense of a new school vision, level of collegiality in the schools, amount of teacher discussion about curriculum and instruction, and a norm of continuous improvement. SB 813 contributed positively to all these changes. Based on additional researcher ratings designed to gauge either a positive or negative impact of SB 813, the reform bill's contribution was most positive for the norm of continuous improvement.

Administrative expertise and practice also improved as a result of these schools' education improvement efforts according to researcher ratings. Administrators were better able to design district and school goals, manage a new curriculum program, orchestrate its implementation, and engage in clinical supervision of instruction. The most striking result for teachers in the sample schools was their large increase in sense of professional efficacy.

Finally, while CAP scores increased, other student outcomes also improved, but at a somewhat lesser rate. Student performance on both standardized tests and local proficiency tests improved. On the other hand, dropout rates also increased, although marginally.

## SPECIAL STUDENT POPULATIONS

A particularly important finding was that special-needs students were not overlooked in reform implementation. Though not specifically addressed by SB 813 , the needs of
special student populations are being addressed by schools and districts. Indeed, the trend seemed to be an increase in both the degree of services and the types of approaches used to provide these services. In addition, nearly all program goals were to move students into the mainstream. Put differently, the goals were not to track and retain students in remedial or special programs. While there was variation in accomplishing these goals, the goals were to remedy academic deficiencies in order to equip students to function successfully in a regular curriculum program. Students still may be at-risk, but they are receiving programs and services and are not being ignored.

While the curriculum in most special-needs programs was aligned with the regular, core curriculum of the school, and had increased substantively in academic rigor, it was still somewhat less rigorous and demanding than the regular program. Special program services also tended to focus on basic skills of reading and mathematics, and usually did not include alternative pedagogical approaches to teaching higher level thinking skills. At the same time, the movement towards English as a Second Language (ESL), structured immersion, and sheltered English in the limited-English-proficient (LEP) student programs fits with a general political trend to emphasize the teaching of English, although the traditional bilingual education programs have had teaching English as a primary goal. Regardless of the genuine concern that was evident for students who need additional help, the services provided to them were rather traditional, providing little additional advantages for these students.

## TOWARD A MORE COMPLEX REFORM AGENDA

Secondary schools in the study easily and quickly changed old course offerings and implemented more traditional, academic courses. This seemed to be the nature of the initial response to SB 813 and other reform stimuli. These changes required few new instructional strategies for teachers, although they did require staff development which was provided to all teachers and administrators and was linked directly to these first-phase reform goals. Secondary school teachers preferred to teach more academic courses than "general track" courses or even many of the electives. They had been trained to teach academic courses, and they did not need additional training or help to begin teaching more of them. The study found wide progress in sample schools on these types of improvements.

However, it was much more difficult for schools to change the nature of teaching strategies or to change the
general nature of the curriculum, such as proposed in California's (and the National Council of Teachers of Mathematics and Science) new mathematics and science curriculum frameworks. It was even more difficult to inject a greater degree of emphasis into the curriculum in areas such as thinking, problem solving, and communication skills. These new practices entail substantial change on the part of teachers and require sophisticated training programs to develop such new pedagogical expertise. The study found less progress on these dimensions of improvement.

Thus, the study found that SB 813 helped several schools and districts to restore their curriculum to traditional notions of academic excellence. The study also found these schools poised to implement a substantially strengthened curriculum program with an emphasis on analytic thinking and problem solving skills, but the study also found few articulated and consistent strategies for doing so.

Some districts had plans for expanding the curriculum and instruction focus to these issues and had begun districtschool conversations about an appropriate implementation process. Other districts already had incorporated these new directions into detailed curriculum guides and had begun new staff development efforts for teachers. None of the districts had extensive or intensive staff training or new curriculum materials in place. Several districts, however, have been preparing department chairs and teachers to facilitate implementation of these new directions.

## POLICY IMPLICATIONS AND SUGGESTIONS

One implication pertains to the relationship between early state initiatives and subsequent local efforts to improve secondary schools. The study found that state improvement efforts in curriculum and instruction, such as included in SB 813, can interact with local initiative to improve secondary schools. Local implementation processes are critical to the success of such improvements, and a common local implementation process is successful across schools that differ ethnically, geographically, and demographically. ${ }^{3}$ Thus, one clear policy implication is that the state should disseminate information about effective local change processes and encourage, if not stimulate, other districts and schools to develop such processes.

Key structural elements of such a local improvement process should include:

1. A district and school vision that focuses on rigorous curriculum content and effective teaching strategies.
2. A district team, consisting of district staff, site adminis-
trators, and teachers, that plans and coordinates the overall implementation activities.
3. A district implementation plan for coordinating and linking the elements (curriculum objectives, texts and instructional materials, teaching strategies, and texts) of the technical core of curriculum and instruction, and that includes an interrelated set of implementation activities over a multiple year time frame.
4. Strategically targeted staff development, linked to the curriculum content and pedagogical skills teacher need to teach the curriculum, relying heavily on mentor teachers to implement, and that provides significantly more on-going and follow-through assistance than simply initial training.
5. District monitoring of student, teacher, and site administrator performance, of faithful program implementation, and of the consistency of school emphases with district substantive directions.
6. A school team of site administrators, department chairs, and teachers that plans and coordinates the specific school implementation activities. This team either should be the school's "curriculum council" or should be tightly connected to such a council or to the principal's cabinet.
7. Assistance to teachers to put the curriculum and instructional strategies into skilled classroom practice.

Another policy implication concerns the role of staff development in education reform. The study found that teachers' instructional strategies had improved but not that much. While districts have provided considerable initial staff development and training, follow-through efforts and assistance in implementing the new curriculum and pedagogy in classrooms have been provided only sporadically. Research shows that this follow-through assistance is critical to substantial classroom impact.

Our impression was that many teachers needed additional subject-matter and pedagogical expertise to implement a new curriculum that both changes substantively the content in mathematics, science, social studies, and language arts, and emphasizes numeric reasoning, critical thinking, written communication, problem solving, cooperative learning, and peer tutoring. If this view is correct, staff developmentindeed, massive human resources development-would be needed to enhance the classroom impact of current and future reform efforts. As the curriculum focus becomes more substantive, and indeed becomes more intertwined with technology, this heavy emphasis on staff development and training should not be a surprise. Moreover, staff development must be tied to other implementation strategies.

One possible staff development policy option is to ex-
pand and focus the Mentor Teacher program. The scope of needed staff development could justify creation of either greater numbers of mentors or more mentor time devoted to reform focused staff development. Mentor activities, moreover, could be focused more directly on new district and state efforts to implement a restructured curriculum designed to develop deeper content knowledge and thinking and problem solving skills.

Finally, the study documented a genuine concern for students who need extra help in mastering the regular curriculum program, and who likely will need even additional help to master a curriculum that emphasizes thinking and problem solving skills. The study also found that while services to these students had increased in sample schools, the services themselves were rather traditional and of the type that had produced insufficient achievement in the past. Thus, it follows that California will need to fund the development of new instructional approaches for providing extra services to lowachieving, limited-English-proficient, low-income, and at-risk-of-dropping-out students that produce larger effects. This new thrust could include funds for research to develop new programs, regulation waiving for local schools to experiment with new approaches, or some combination of the two. The fact is that education excellence, so far, has not left at-risk students unnoticed, but the education system's strategies for
dealing with at-risk students need strengthening. The will is there, but new ways are needed to make these programs more effective.
> ${ }^{1}$ Allan R. Odden and David D. Marsh, How State Education Reform Can Improve Secondary Schools (Berkeley, CA: University of California, Policy Analysis for California Education, December 1987).
> ${ }^{2}$ This study utilized a purposive, rather than representative, sample of 17 secondary schools known to be in the process of becoming academically more rigorous. Important lessons were leamed as a result. However, based solely on the selection of schools, results are not meant to be representative of school experiences statewide. "Sample" in this case refers only to the 17 secondary schools specially selected for this study.
> ${ }^{3}$ The study found that implementation processes were different for schools in the largest, urban districts, primarily because these districts had several factors, such as desegregation mandates, other than the state's initiatives in SB 813 dictating the use of their time and resources. At the same time, initiatives in most of the urban districts studied also targeted core curriculum and instruction for improvement.


[^0]:    ${ }^{1}$ Private school enrollments are an additional 531,000 and are expected to hold steady or decline slightly during the next decade.
    ${ }^{2}$ National Education Association figures excluding capital outlay and adjusted for national comparability. Total perpupil funding in California including General Fund, special funds, and capital outlay is $\$ 4,469$.
    ${ }^{3}$ The assumption here is 30 pupils per class and 1983 perpupil spending deflated to 1978 levels.

[^1]:    ${ }^{1}$ Continuation high schools are designed to offer students an alternative to a regular, comprehensive high school. Students are assigned to a continuation high school for a variety of reasons, which may include pregnancy, behavior problems, or severe attendance problems. These schools feature programs of individualized instruction with intensive guidance services and emphasize occupation-oriented instruction and work study programs. Continuation schools offer a compressed program with a shorter school day.
    ${ }^{2}$ The remainder were primarily special education classes.
    ${ }^{3}$ Lila N. Carol, et al. School Boards: Strengthening Grass Roots Leadership (Washington, DC: Institute for Educational Leadership, 1987).
    ${ }^{4}$ Poll results supplied to PACE by CTA. Poll was representative for the state and conducted by an independent research firm.
    ${ }^{5}$ Report and Recommendations of the California Commission on School Governance and Management (Sacramento, CA: California Commission on School Govrenance and Management, 1985).

[^2]:    In connection with the preparation of this chapter, we are particularly indebted to the architects and managers of the California Assessment Program, Alex Law, Dale Carlson, and Pat McCabe, and to John Vaccaro of the College Board and Durelle Yarbro of the Educational Testing Service. We also acknowledge the valuable help of Randi Hagen of the Mt. Diablo Unified School District.

[^3]:    SOURCE: California Department of Education.

[^4]:    SOURCE: California State Department of Education, California Assessment Program.

[^5]:    ${ }^{1}$ For a detailed assessment of SB 813, see chapter 9.

