Conditions of Education in California 1991

Policy Analysis For California Education (PACE)

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Contents

List of Figures

The Evolving Context of California Education

Student Achievement

Enrollment

Finance

System Characteristics

Foreword

This is the seventh edition of *Conditions of Education in California*. Since 1984, PACE has endeavored to compile a continuing picture of education in the state by analyzing data about enrollment trends, student achievement, fiscal conditions, human resources, education governance, and the politics of education. These analyses have been limited to comparisons of California with itself over time.

The 1991 version represents a shift. Beginning with this edition of *Conditions of Education*, PACE will analyze California education dimensions by placing California state-specific data within multi-state, national, and, on occasion, international contexts.

We believe this alteration is both timely and necessary. Increasingly, nationwide education influences, as well as policies and programs promulgated in other states, are having, will have, or should have policy reverberations in California. These dynamics now will be reflected in *Conditions of Education.*

Chapter 1 of this edition of *Conditions of Education* explores the *national* context of evolving education policy issues. Chapter 2 continues PACE's traditional analysis of the interplay of Sacramento political dynamics and education. Chapter 3—Student Achievement—begins to build the bridge to the new *Conditions of Education.* This chapter analyzes California students' academic performance, in part, by employing nationally collected data describing student mathematics achievement in other states. This chapter is illustrative of the types of comparisons PACE will conduct for a broader array of topics in subsequent editions of *Conditions of Education.*

The remaining three chapters of this volume—Student Enrollment, Finance, and System Characteristics—provide graphic representations of the longitudinal data conventionally included in *Conditions of Education.*

We hope you find this new version of *Conditions of Education* useful. As always, we welcome your comments and suggestions.

James W. Guthrie Michael W. Kirst Allan R. Odden Julia E. Koppich

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 at Berkeley, Stanford University, and the University of Southern California. It is funded by the William and Flora Hewlett Foundation and directed by James W. Guthrie, Michael W. Kirst, and Allan R. Odden.

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 policymakers, 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 short-term needs of decision-makers for information and analysis.

Chapter 1

The Evolving Context of California Education

The good news is that academic achievement among California's public school students is improving. The bad news is that it still has far further to go before being able to meet so-called "world class standards." More troublesome yet, the state presently is beset by a complex web of troubling conditions which severely threaten continued education reform.

Dramatically increasing enrollments, declining real revenues, and debilitating political issues are combining to distract from a concentrated state effort to improve California's schools. Each of these conditions, as well as student performance, is itself the subject of a subsequent chapter in this report. However, here we wish to bring to the reader's attention another development which, while not currently on the front burner of policy consideration in California, we believe will become increasingly important in the future.

We refer to building public visibility and political consensus around *national* strategies for accelerating education reform. The following section describes these multiple national strategies, and the individuals and institutions responsible for them.

The message here is *not* that California's public education system is about to be subordinated to a monolithic national reform effort. Such is a remote if not impossible idea. However, the following national reform proposals are establishing a new evolving context in which California policymakers and educators must operate. The previously mentioned distractions of enrollment growth, resource decline, and political disruption are presently preventing these national reform strategies from exerting substantial influence in California. However, we predict that in time, the policy environment will evolve to the point that these ideas will be considered far more intensely.

NATIONAL EDUCATION REFORM STRATEGIES

For more than 350 years the hallmark of United States education has been local and state control. But in the past few years there has been a dramatic increase in nationwide initiatives for education policy. These initiatives may take many more years to become concrete, but by the end of the 1990s they are likely to have a major impact on states and localities across the United States.

Given the slow economic growth in most states, there will be few additional resources available for state education initiatives during most of the 1990s. Consequently, the period 1991–1995 will likely witness a larger portion of nationwide initiatives and a smaller complement of new state programs that were the hallmark of the 1980s. This turnabout represents a major contrast from the decade of the 1980s when state-level leadership (especially between 1983 and 1987) produced large-scale reform packages in 44 states and a net increase in education expenditures of 30 percent in real terms for the decade.

The key concept here is *nationwide* influence as contrasted with *federal government* policies. Few prognosticators predict a large array of mandated federal policies, or substantial increases in federal aid. (Federal aid currently

accounts for only 5 percent of total education expenditures.) The federal government's role will be more indirect, through supporting research and development and systematically reporting pupil outcomes.

For example, by the end of the 1990s, the U.S. likely will have nationwide curriculum standards and subject matter frameworks, though not a detailed national curriculum. Currently, nationwide policy is all around us—the Scholastic Aptitude Test (SAT), American College Test (ACT), school accreditation agencies such as the North Central Association of Schools and Colleges, and organizations such as the Education Commission of the States (ECS), the College Entrance Examination Board, and the National Collegiate Athletic Association. These policy-setting organizations do not represent a specific group or cross-section of education employees and they possess sufficient legitimacy to recommend or manage nationwide policies.

Many of the new 1990s political developments arise from the perception about the alleged dismal status of K–12 education standards as indicated by the following:

1. Current state and local standards for pupil achievement and teacher performance are lacking in rigor and do not provide uniform pupil outcome data crucially needed for interstate or local comparisons.

2. Commonly used multiple choice tests are excessively oriented to low-level basic skills that inappropriately emphasize single right answers. Moreover, the proclivity of local education agencies is to choose commercial tests that do *not* adequately emphasize analysis, statistical inference, mathematical problem-solving, hands-on science, synthesis, expository writing, and complex reading. Many widely available standardized tests, such as the California Test of Basic Skills, and Stanford or Metropolitan Achievement Tests, are not geared to the high curricular standards of our economic competitors in Europe and Asia. Since the United States is involved in worldwide economic competition, solely local control of tests and curriculum is a luxury the U.S. can no longer afford.

3. Since the commonly used standardized multiple choice tests are at such a low level, the parents and general public receive a "phony story" that exaggerates what U.S. pupils know and can do today compared to prior decades or to students in other nations. The "Lake Woebegone effect" becomes the reality.

4. U.S. tests and exams often do not contain "high stakes" for the pupils who take them. Few employers look at transcripts of high school graduates, and state assessments are not used for college entrance. The SAT is not aligned with the high school curriculum and alleges to measure "aptitude" rather than achievement.

As will be seen, a coalition of nationwide leaders has concluded that national subject matter curricular standards that meet world-class benchmarks are needed. This coalition contends that a nationwide exam system should be developed and aligned to these world class standards in five core subjects—English, mathematics, science, social studies, and foreign languages. Moreover, the exams should be reported for individual students, and "high stakes" decisions should be based largely on student performance. Specifically, contends this group of leaders, employers should utilize the national exams when hiring high school graduates, and universities should consider national exam scores as well as high school grades. Further, these national initiatives need to be part of a state systemic reform strategy that revamps staff development and teacher training so that it is compatible with the national curricular standards.

California policy contained most of the elements of systemic reform by the late 1980s. The state's curriculum frameworks, for example, widely are acknowledged to be leading California toward "world class," or at least model national curricular, standards. However, since the 1980s, the state has repealed its pupil assessment program and failed to invest adequately in staff development. Conse-

quently, few teachers are able to implement curriculum frameworks, and measurements of student achievement are spotty at best.

SPECIFIC COMPONENTS OF A FUTURE NATION-WIDE STRATEGY

Several emerging and evolving components of a nation-wide education strategy are described below. Some of the elements are compatible with one another. Others seemingly are in conflict. At least a portion of the policy debates around these issues will involve a process of sorting out, streamlining, combining, and perhaps eliminating strategies that currently are receiving national attention.

National Education Goals Panel

The National Education Goals Panel (NEGP) resulted from the 1989 Charlottesville Summit of the president and the nation's governors. That summit produced the six national education goals (Figure 1.1). In 1992, the NEGP will be broadened to include members of Congress and public members, as well as representative governors and members of the executive branch. (Congressional members were not included immediately after the 1989 summit and Congressional Democrats want education to broaden the structure and functions of NEGP.) The National Governors Association (NGA) has been unusually active in elaborating and measuring the national goals. NGA also is playing a major role in the annual reports which describe U.S. progress toward meeting the goals.

Figure 1.1: National Education Goals

1. *Readiness for School*

   By the year 2000, all children in America will start school ready to learn.

2. *High School Completion*

   By the year 2000, the high school graduation rate will increase to at least 90 percent.

3. *Student Achievement and Citizenship*

   By the year 2000, American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.

4. *Science and Mathematics*

   By the year 2000, U.S. students will be first in the world in science and mathematics achievement.

5. *Adult Literacy and Lifelong Learning*

   By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

6. *Safe, Disciplined, and Drug-Free Schools*

   By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

National standards, specifically, are contained in Goals 3 and 4:

- American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so that they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.

- U.S. students will be first in the world in science and mathematics achievement.

National Council for Education Standards and Testing

The National Council for Education Standards and Testing (NCEST) was created by Congress in 1991. The purpose of NCEST, a thirty-member bipartisan board co-chaired by the same governors who are leaders in National Education Goals Panel, is to decide the feasibility and desirability of national standards and assessments. The NCEST board represents a good example of the emerging national coalition. Among its members are Governor Carroll A. Campbell, Jr. (R) South Carolina; Governor Roy Romer (D) Colorado; Gordon Ambach, Executive Director, Council of Chief State School Officers; U.S. Senator Jeff Bingaman (D) New Mexico, Committee on Labor and Human Resources; Iris Carl, National Council of Teachers of Mathematics; Lynne V. Cheney, Executive Director, National Endowment for the Humanities; Ramon C. Cortines, Superintendent, San Francisco Unified School District; Chester E. Finn, Jr., Vanderbilt University; Keith Geiger, President, National Education Association; U.S. Senator Orrin Hatch (R) Utah, Committee on Labor and Human Resources; David Kearns, U.S. Department of Education (former CEO, Xerox Corporation); Roger B. Porter, The White House; Lauren Resnick, University of Pittsburgh; Roger Semerad, RJR Nabisco; Albert Shanker, President, American Federation of Teachers; and Marshall S. Smith, Dean, School of Education, Stanford University. NCEST's final report in January 1992 advocated the establishment of national standards and exams, with heavy reliance on "bottom-up initiatives" from professional organizations such as the National Council of Teachers of Mathematics (NCTM). NCEST is important because, unlike the National Education Goals Panel, it has congressional authorization and participation, so it expands the coalition beyond the governors and the Bush administration.

New Standards Project

The New Standards Project (NSP) is funded by the Pew Memorial Trust and the MacArthur Foundation and is charged with building a national consensus for educational standards in five core subject areas (mathematical problem-solving, hands-on science, expository writing, complex reading, and synthesis/analysis). NSP is co-directed by Marc Tucker of the National Center on Education and the Economy and Lauren Resnick of the University of Pittsburgh. NSP is also designing high-stakes examinations intended to be compatible with national standards. The first subject area test to be developed will probably be in mathematics using the NCTM standards regarded by many as world-class quality.

National Assessment of Educational Progress

Since the 1970s, the National Assessment of Educational Progress (NAEP) has conducted periodic national assessments of student achievement in core subject areas. NAEP is funded by the federal government and overseen by a component of the U.S. Department of Education. The federal contractor is the Educational Testing Service (ETS), which supplies NAEP with subject matter trends for its reports. NAEP is not based on curricular standards or frameworks such as are envisioned for the high-stakes individual pupil exam by the National Education Goals Panel, National Council for Education Standards and Testing, or New Standards Project. NAEP is not meant to guide classroom syllabi and therefore its long-run future in "world-class high-stakes" exams is uncertain. In the short run, it

will continue as an overall measure of educational attainment at the national and state levels, but will *not* be an exam each pupil takes. NAEP will be used to compare state performance and provide impetus for state curricular reform. (NAEP is examined more completely in Chapter 3 of this volume.)

U.S. Labor Department Secretary's Commission for Achieving Necessary Skills

This activity, known as SCANS, produced a report outlining the skills necessary for meeting the demands of the U.S. workplace. These workplace skills also provide guidance for pupil exams but are not entirely compatible with the concepts emphasized by New Standards Project or National Assessment of Educational Progress. SCANS stresses group work, oral communication, and interpersonal skills, but these skills are not featured, at least so far, by NAEP or NSP. Group skills, for example, are difficult to combine with individual high-stakes examinations. These contradictions will need to be reconciled as policy debates continue.

New American Schools Development Corporation

The New American Schools Development Corporation, known by the acronym NASDC, is a board composed primarily of big U.S. businesses that will fund several "break-the-mold" school experiments. All grantees must address "world-class" standards in the core subject areas specified in National Education Goals Panel and National Council for Education Standards and Testing. NASDC hopes to provide $200 million in privately funded school experiments between 1992 and 1996, and will commit at least $25 million in 1992 for design teams.

America 2000

This is President Bush's proposed strategy to improve U.S. education by the year 2000. The proposal combines a series of federal, state, and private initiatives designed to meet the previously mentioned six national Education Goals. Most relevant to this analysis is the president's support for world-class standards, high-stakes testing, federal funding for break-the-mold schools developed by NASDC, and a continuation of NAEP. "America 2000" also includes a heavy press for "choice" extending to public and private schools. However, this issue will be fought out at the state rather than the federal level unless there is a change in Congress to Republican control.

National Board for Professional Teaching Standards

The National Board for Professional Teaching Standards (NBPTS), based in Detroit, Michigan, has a 63-member board (two-thirds teachers) that will begin in 1994 to certify teachers nationally. NBPTS certification assessments will be based on the ability of teachers to teach the curriculum envisioned by the New Standards Project and National Assessment of Educational Progress. NBPTS views certification as appropriate solely for teachers with five or more years of experience. State and local education agencies will be urged to reward teachers who pass NBPTS assessments and become "board certified." NBPTS assessments will be different from any current teacher evaluations and will feature the ability to adapt subject matter to diverse students. NBPTS assessments will stress teachers' knowledge of their students and their demonstrated ability to cooperate with other teachers to improve local schools.

Neighborhood Schools Improvement Act (Two Bills Pending in Congress)

These bills provide grants to states to be used for state systemic reform plans. Specifically, HR 3320 specifies federal aid shall be used to "develop innovative reform plans which include state achievement goals, a means for developing or adopting high quality, challenging curricular frameworks and coordinated curricular materials, professional development strategies, and assessment instruments."

HR 3320 has bipartisan Congressional support, but is opposed by the Bush administration which views it primarily as a Democratic alternative to America 2000.

IMPLICATIONS FOR STATE POLICY

These nationwide efforts may not result in all their intended outcomes or be as well integrated as the list above implies. However, it is likely that the general direction of all these initiatives will result in new nationwide and state policies by the end of the decade. Probably, the "national exam" will *not* be a single exam but rather an examination to which state pupil assessment systems could be anchored. The National Board for Professional Teaching Standards is likely to have the most immediate impact because it does not require development of the other national reform strategy components as prerequisites. Among other decisions, states will need to determine whether to recognize and reward board-certified teachers by 1994.

There is opposition to these national strategies—focused, for example, on the impracticality and cost of national exams. Nevertheless, the political momentum behind these national reform efforts is impressive and growing. The political support for national changes is *not* solely top-down, but rather stems from all directions, including business, professional associations (NCTM), universities, and local school districts. As evidence of broad-based support, the January 1992 recommendations of the National Council for Education Standards and Testing for national standards and exams was supported by both the American Federation of Teachers and the National Education Association, as well as by the National School Boards Association.

The widest political disagreement concerns the federal role for meeting world-class standards and providing equity for all students. The view of most elected Republicans is that the federal role is limited to "keeping score" on progress toward the national goals and providing research and development. Many elected Democrats contend that the federal government should play a major role in funding state and local operations, especially for school readiness, finance equity, and the disadvantaged. After a protracted battle, the 1992 National Council on Education Standards and Testing report concluded that these functions are the responsibility of state and local education agencies. This political conflict over federal funding of school operations will likely intensify as more federal funds are made available for reallocation from defense cuts.

States need to monitor these developments carefully while keeping in mind that state curricular policy developed in the 1980s is quite similar to the orientation of these nationwide forces. California's new state assessment, for example, includes revamped curricular frameworks and individual testing, and is compatible with the high-stakes pupil outcomes.

Components of the national strategy can mesh productively. Standards, curriculum frameworks, and exams do form a nice package. State policy, therefore, needs to keep the interrelationships of these strategies in mind rather than merely look at them as discrete, independent reform efforts. Moreover, the developmental costs for these national efforts need not be borne by the hard-pressed state budgets, but rather can rely on foundations, businesses, and federal appropriations.

IMPLICATIONS FOR CALIFORNIA

California state education policy will be shaped in many ways by these nationwide influences. California does not have a statewide goal-setting process or any specific education targets that it is trying to reach. Should California adopt the national goals without any supplementation for the unique California context?

California has an implicit set of education standards embodied in its subject matter curricular frameworks. However, these standards are not yet explicitly linked to a state exam or assessment. California's new student assessment program is at least three years away. Once in place, the new system is likely to be closely aligned to national exams since California leaders such as State Superintendent Honig and California Assessment Program Director Dale Carlson are key players in the nationwide coalition. Francie

Alexander, who headed California curriculum frameworks development in the 1980s, has moved to the U.S. Department of Education where she is leading a similar national effort.

California may also be an early proponent of the National Board for Professional Teaching Standards. Superintendent Honig is on the board. The board's Vice Chair is Claire Pelton, a San Jose Unified School District teacher. The teacher evaluation system that resulted from SB 813 in 1983 is not based on the sophisticated new concepts featured in NBPTS assessments. Simulations, portfolios, and demonstration teaching exercises, critical features of national board certification, no doubt will influence state and local policies. The national board's vision of "what teachers should know and be able to do" may also have a significant impact on California teacher preparation and induction.

California school districts have responded enthusiastically to the NASDC request for proposals for "break-the-mold" schools. Consortiums have been formed to spur large-scale innovative changes.

California also would benefit substantially from the pending bills in Congress (S2 and HR 3320) that stress systemic reform. California has an overall state policy vision that includes the element of systemic reform, but many of these elements are implemented in a partial manner only. Conceptualization of the entire systemic process is sound and exemplary. But the implementation has faltered because of insufficient political consensus and a consequent lack of resources. This shortfall is particularly acute with respect to staff development and preservice teacher education.

New federal aid in S2 or HR 3320 could, at least partially, fill these gaps. Investment even to reach the teachers who want to teach the new state frameworks is woefully inadequate, and time and resources need to be invested to convert the skeptics as well.

Superintendent Honig has been able to envision the many interlocking parts of systemic reform. However, the dispute between the state superintendent and former governor George Deukmejian led to a gubernatorial veto of the crucial California Assessment Program, shattering the state's accountability system. The state's staggering pupil enrollment growth—in excess of 200,000 students a year—has stretched the state's resources for education "basics" and consigned reform initiatives to the fiscal background. California school districts are frequently so hard-pressed to contend with enrollment growth and limited-English-proficient (LEP) students that little time or resources are left to implement the state's reform vision.

Then there is the issue of preservice and inservice training. The state department of education has not had sufficient leverage over teacher preparation, especially in the California State University (CSU) system. (The University of California prepares only a small percentage of new teachers, while CSU accounts for between 60 and 70 percent.) In addition, there are some effective state staff development institutes and local programs, but these reach only a small percentage of teachers. Most local staff development programs are not even aligned with the state's curricular efforts. The state's large-scale academy for prospective principals, however, is well designed to help with leadership in systemic reform, especially in the curricular area.

Finally, state education department staff has been reduced drastically since 1989, a condition which has eroded the state's leadership capacity. The state superintendent has been under fire from conflict of interest allegations concerning his wife's consulting firm, drawing time and attention away from reform efforts.

Nevertheless, California is "inching forward" and making progress on systemic reform. The curriculum frameworks drive the education dialogue in the state. The recession has slowed but not stopped this process. A crucial priority is to focus on the missing elements in the implementation of systemic reform—primarily building teacher and school-site decision-making capacity. The subject matter frameworks and texts are in reasonable condition to support successful change. The testing system is uncertain. A small school-based decision-making restructuring program ($8 million) will become operational in 1992–93. California has been a leader in school-linked social services and this remains a priority of Governor Wilson, who hopes to expand this effort in 1992–93 with $40 million in operational grants to local schools and social service agencies.

These components of a systemic reform package for California's schools undoubtedly would result in greater reform progress if they were fully implemented. However, current concerns for awesome enrollment growth, shrinking real resources, and political controversy are overshadowing important successes that have been made. These conditions hold the prospect for impeding the additional future changes that are badly needed.

Chapter 2

Capital Perspective

CALIFORNIA SCHOOL FINANCE AND SACRAMENTO POLITICS

The 1990 *Conditions of Education* Capital Perspective chapter closed with a mixed view to the future. On the positive side of the ledger was an incoming governor with a new and fresh attitude who appeared to be making every early effort to develop a bipartisan, consensual agreement to resolve the impending budget crisis, a departure from his predecessor's close-to-the-vest approach. The governor-elect's advocacy for integrated health, education, and social services for young people was a hallmark of his campaign and promised additional funds for "preventive" health, education and social services for children. Another positive note was struck by the appointment of Maureen DiMarco to a soon-to-be created cabinet-level position of Secretary of Child Development and Education. DiMarco, former president of the California School Boards Assocation, had led, with Bill Honig, the 1990 fight to maintain Proposition 98's school funding guarantees. That appointment promised a strong, highly visible, pro-education voice within the inner circles of the administration. Finally, the governor signaled, partially through his appointment of DiMarco, that the long standing feud between the governor's office and the superintendent of public instruction might be drawing to a close.

But in spite of all the good will generated by the prospects of a new, pro-education administration, the negative side of the equation, dominated by the dual pincers of a severe recession and the crippling limitations placed on the legislature and the governor by various propositions, simply outweighed the positive notes. PACE concluded, "The state's education problems are not 'on hold' and until the fiscal and governance crises can be resolved they will continue to worsen."

Nineteen ninety-one was a rough year for California school finance. And as the year progressed, things went from bad to worse. Moreover, there appears to be little light at the end of the fiscal tunnel as the state enters 1992.

All through 1991 the fiscal and governance crisis worsened. What had been projected just prior to the November 1990 election as a deficit of approximately $1 billion for the current year grew exponentially so that in the few short months between the election and the ascendancy of the new governor, the projected shortfall had grown to $7 billion for the current (1990–91) and budget (1991–92) years.

Faced with a deficit of this magnitude, the governor submitted an austere 1991–92 budget for all services, including education. The education budget proposed full funding of K–12 enrollment growth for both the revenue limit and most categorical programs. The governor even proposed to reinstate the California Assessment Program, although he wanted to count half of the appropriation as part of the Proposition 98 guarantee. But these proposed funding increases were offset by a proposed zero cost of living (COLA) adjustment for 1992–93, even though the projected COLA was 4.77 percent. The budget also eliminated the Mentor Teacher Program, class size reduction funds, and held at fixed levels funds for transportation and summer school. Further, the budget proposed a new way to calculate average daily student attendance (ADA), the result of which would have dropped state education aid another $250 million. In addition, the 1990–91 Proposition 98 "reserve" of $500 million was lost because of state revenue shortfalls. Finally, the budget would have left school districts respon-

sible for paying counties for the administrative costs of collecting property taxes.

HEALTHY START

Despite this scenario of fiscal gloom, the governor followed through with his pledge to improve the conditions of children by proposing a $100 million Healthy Start package that included the first year of a five-year phase-in of an early childhood program for every needy four-year-old, and several other school-linked health and counseling initiatives to prevent children's school failure caused by unmet health, psychological, or counseling needs.

The key components of the governor's package included:

- Preschool reform and expansion $50 million
- Healthy Start initiative $20 million
- Elementary mental health counseling $10 million
- Volunteers and mentors program $ 5 million
- Prenatal substance abuse education $ 4 million
- Early intervention for school success $ 1 million
- New pupil assessment program $10 million

Additionally, adding to the signals that Governor Wilson and the superintendent of public instruction would not repeat the Deukmejian/Honig battles of the past, the budget appropriated almost $3 million to restore cuts in the department of education budget made in the last year of the Deukmejian administration.

Given the size of the projected deficit, the proposed budget package could have been much worse. Indeed, the decline in state revenues had shifted the Proposition 98 requirements, which were designed to uphold a real funding base for schools, to permit an actual decline in state education funding of $500 million.

However, school districts were less than enthusiastic about the governor's proposals. Although many welcomed the new initiatives, most districts were faced with the sorry prospect of laying off employees, reducing classes, and increasing class size. A proposed state budget with a zero COLA dampened any enthusiasm they might have displayed in rosier times. Districts historically have supported categorical programs only after the basic needs of growth and cost-of-living increases have been funded. This year was no exception. On the other hand, the preventative initiatives embodied in the Healthy Start proposals showed that the governor saw education as inextricably linked to the broader conditions of children. While this perspective did not sit that well with the education community, the governor held fast to these initiatives and they remained virtually intact when the final budget was inked.

As the year evolved, the national recession deepened and the impact on California was more profound than at any time in recent history. By the middle of the summer, the projected deficit had risen to $14 billion, and even that dismal number was calculated on the basis of fairly optimistic assumptions about the California economy in 1991, which did not hold during the next twelve months.

THE DILEMMA OF PROPOSITION 98

A major dilemma in the budget debate was Proposition 98, enacted by the voters in 1989 to "guarantee" a funding base for the public schools. Proposition 98 required state education funding to be the greater amount calculated from two tests. Test 1 required the state to spend the same percentage of the state budget on K–14 education as in 1986–87. Test 2 required the same amount of state and local revenues as the previous year, adjusted for both enrollment growth and inflation. Proposition 111, enacted by the voters in 1990, added a third test. Test 3 required the same amount of state and local revenues as the previous year, adjusted for enrollment growth and growth in state taxes plus 0.5 percent. Since Test 3 produced a lower level of revenues during times of slow state tax revenue growth, it became the operative test for the budget deliberations. Test 3 also required the state to take the amount of state aid that was lost

by using the amount determined by Test 3 rather than Test 1 or Test 2 and add it back to education funding in subsequent years. Resolving the budget crisis within these real constraints of Proposition 98 became a key focus of the budget debates.

The final state budget was balanced, but only by a combination of deep program cuts ($5.1 billion), tax increases ($5.1 billion), shifts of state responsibilities to counties ($2.1 billion), and other fiscal accounting changes ($1.1 billion) that, together with assumptions about how the economy would grow in 1992, closed the largest fiscal hole in a state's budget in the history of any state, if not the nation. The genius of the final budget was that it was reached even with the severe constraints of Proposition 98.

When the fiscal dust settled, an education budget was agreed to and Proposition 98 remained intact but only through a series of compromises, a little bit of looking the other way, and some good old-fashioned political bargaining. Further, the governor's Healthy Start initiatives were fully funded, making California a leader in trying to create and articulate an early intervention strategy for improving the conditions of children in order to help improve their educational attainment. Finally, the Mentor Teacher Program was restored, the development of a new and trend-setting California Assessment Program was enacted to move the state more directly into a system of performance-based assessment, and the Business Roundtable's restructuring program, SB 1274, was funded for the planning year.

While deep recessions and large deficits rarely help produce upbeat fiscal scenarios, during 1991 they ironically helped to maintain the integrity of Proposition 98. As the deficit grew larger and the state revenue decline grew deeper, calculations under the new Test 3 began to show that education had been substantially *over funded* in 1990–91. Indeed, the 1990 portion of the deficit actually required the state to dramatically reduce state education aid for 1990–91. Such an event would have been very difficult for schools, which by that time were nearly completing their 1991 fiscal year.

In normal times, the state would have been without workable options. Proposition 98 itself actually opened the hole in the fiscal defensive line and allowed the state both to maintain Proposition 98 requirements for 1991–92, and to not cut the flow of education dollars for 1990–91. The solution was for the state to "lend" districts the excess funds they were receiving over the Proposition 98 limit for 1990–91. Districts would then pay back that amount in their 1991–92 appropriations. This fiscal sleight-of-hand allowed the state to fully fund the Test 3 level for 1991–92, but with excess dollars that had been appropriated and distributed to schools for 1990–91. While not a strategy anyone envisioned when the Proposition 98 tests were written, it was quite creative given the size of the deficit, the desire among many to maintain Proposition 98, and the wish among all to avoid a bloody battle over school funding.

For the education community the fact that Proposition 98 was not suspended was an important plus. Had Proposition 98 been suspended, the state would have been obligated only to restore prior year reductions if state revenues grew at a rate faster than personal income growth. Absent the suspension, schools will be constitutionally guaranteed a full restoration of 1991–92 cuts in 1992–93. But as recent history shows us, even a constitutional guarantee is not much in times of severe fiscal crisis.

FUNDING THE SCHOOLS

Total education funding increased from $25.3 billion in 1990–91 to $26.9 billion for 1991–92, an increase of $1.6 billion, or just over a 6 percent hike. On a per-pupil basis, funding increased from $4,830 per ADA in 1990–91 to $4,938 in 1991–92. When adjusted for inflation, however, the numbers were more sobering. Per-pupil funding declined 1.9 percent, from $3,439 in 1990–91 to $3,373 for 1991–92. This followed a 2.9 percent per-pupil decline in the previous year, which came on top of a 0.2 percent decline from the second preceding year. In fact, every year since Proposition 98 was passed, rather than working to maintain the school funding base, politics and economics have worked to *reduce* real per-pupil education resources. While education funding probably would have been lower

without Proposition 98, the results of the last three years clearly show that even with a constitutional requirement, it is virtually impossible to "guarantee" a funding level for the schools.

Categorical programs fared about the same as the revenue limit program. Despite statutory requirements for cost-of-living increases, only enrollment growth was funded. Most categoricals received the same amount for 1991–92 as they had in 1990–91. The result was a decline in real resources for the special needs purposes behind each categorical program. For districts, the implication was to cut categorical services, use funds from the general fund to finance them at constant levels, or find other revenue sources to fund them. One result is that nineteen districts are now charging fees averaging $150 for home-to-school transportation, a practice that is being challenged in court but which is growing in use.

Perhaps the most interesting long-run initiative that emerged from the fiscal battles of 1991 concerned new sources of local revenues. In the twilight of last year's legislative session, a bill was enacted that provides for a local sales tax option for school districts within each county. Counties are able to enact a sales tax surcharge by a majority vote in the county. The funds are split between the county and school districts within the county, the ratio determined by negotiations within each county. Each school district receives an equal per-pupil amount that is determined by dividing the total for education by the ADA of each district. Almost immediately thereafter, San Francisco County approved such a surcharge in a November 1991 election.

While these programs currently are being challenged on other grounds, they could represent the beginning of efforts to increase the local share of education funding, which now contributes only 21.2 percent to the education pot. If these new sources of local revenues are allowed to stand as currently designed, however, they could be challenged under the *Serrano v. Priest* ruling. That decision requires the state to reduce tax-base-related education spending per-pupil differences to within $100 (inflation-adjusted) of the statewide average spending. Just as the property tax base per pupil varies among school districts, so also does the sales tax base vary across counties. Over the long term, the state might be required to "power equalize" these revenues, making the per-pupil yield from a sales tax surcharge the same in all counties across the state.

POLITICS AND THE BUDGET

Just as the budget situation and its consequent impact on school finance steadily worsened during the course of 1991, so, too, did the context in which issues about education policies and funding take place. In the beginning of 1991, optimists trusted that a new, more open, more moderate governor would lead to improved working relationships between the governor and the legislature, an essential prerequisite to a resolution of the state's unprecedented fiscal and governance problems.

Such was not to be. First, the scope of the budgetary problem became so huge that reasonable and rational discourse became more and more difficult. Deficits of the size faced in 1991 made any solutions painful and were virtually guaranteed to alienate partisans. At a certain stage in its development a deficit problem becomes so large that only a combination of tax increases and program cuts are possible if the problem is to be resolved. The governor's willingness to support a tax increase in order to balance the budget inflamed conservative Republicans and played a key role in the drop in his public popularity. And as he made moves to appease the right, he angered liberal and moderate supporters. Concomitantly, the legislature's willingness to consider program reductions in the very programs they had historically supported caused their potential electoral support to wane. In sum, the problem had become so huge that any solution was bound to be unpopular.

The budget resolution in 1991 required a degree of comity to achieve. It is hard to see that comity continuing to manifest itself into the 1992 session. Any real hope of a positive working relationship between the governor and the legislature were effectively dashed over the highly charged and almost totally partisan clash over reapportionment. There is no issue which more inflames the passions of

legislators than the determination of the boundaries for their own reelection. When Governor Wilson vetoed the legislatively approved reapportionment plan and instead appointed a team of retired justices to establish a new reapportionment map, the Democratic legislative leadership (especially in the more partisan Assembly) were so angered that any hopes for a continuation of the relatively harmonious relations which existed at the onset of Wilson's administration were effectively dead.

On the school front, Governor Wilson's insistence that he would veto legislation to provide a loan to the financially troubled Richmond School District only on the condition that collective bargaining be suspended struck a blow at the statewide teachers associations which view collective bargaining as essential to their survival as reapportionment is to legislators. This sparked a heated exchange between the governor and the California Teachers Association which harkened back to the vituperative days of the Deukmejian administration.

At year's end, Maureen DiMarco's appointment as secretary of the newly formed cabinet-level Department for Child Development and Education was yet to be confirmed by the Senate. The governor's legislation to create the department was floundering in the Assembly. DiMarco was getting it from both sides. Although Democrats were generally supportive of DiMarco and her proposals, Democrats in the Assembly saw the demise of this proposal as a way of striking back at the governor. On the other side, conservative Republicans were not leaping to DiMarco's defense. Many opposed the appointment of a Democrat, such as DiMarco, in the first place, opposed her historically close working relationship with Honig, and were not at all enthusiastic about her proposed education reforms.

In addition, the optimism that once prevailed about the improvement that would take place in the relationships between the state board of education and the governor with new appointees by Wilson appeared to be premature as the board and Honig continued to fight over control of various prerogatives historically enjoyed by the superintendent and coveted by the state board. The battle culminated when the board voted to hire outside counsel to pursue their long-standing argument with the superintendent over their respective roles. The board seeks appointing authority over deputies, budget approval and oversight, approval of policy communication with districts, and appointment authority of department employees to staff the state board.

In addition, Honig's problems with the Quality Education Project (QEP), the parental involvement program operated by his wife Nancy, continue to grow. Allegations, which Honig denies, of inappropriate use of federal categorical aid funds loom larger each day, and both federal and state investigations are ongoing. Honig, despite being viewed nationally as the premier state educational leader, has suffered an enormous drop in public confidence since this issue surfaced.

THE ISSUE OF "CHOICE"

Finally, as the year drew to a close, the education community was deeply embroiled in an all-out effort to combat the highly visible initiative campaign to institute an education voucher system. Joseph Alibrandi, the former chair of the Business Roundtable's education committee, is leading the effort, which unlike earlier initiative attempts appears to be well organized and well financed. Opposition to the voucher system will take much of the energy that might otherwise be expended on budget issues and legislative school reform issues. The issue of "choice" is an increasingly popular concept among legislators, and a half-dozen or so proposals on the subject were introduced this last session. Most observers see some kind of school choice measure becoming law in the near future.

The principal issue in the choice proposals is the scope of the choice. There is broad support for allowing parents to choose which schools their children will attend within a given school district. Allowing choice across public school district boundaries has a smaller, but growing, number of advocates. Allowing choice to include the private sector is favored by only a small group of legislators and would have no chance of passage in the current legislature. In any event,

choice and vouchers will be high on the legislative agenda for 1992.

SUMMARY

In sum, as one looks back on the events of 1991 and forward to the prospects of 1992, it is difficult to find positive signs that the state will be able to meaningfully confront the major educational problems it faces. If anything, the prospects for 1992 appear to be worse than the prospects for 1991 at this time last year. Gone is the relatively goodwill that existed between the legislature and the governor. Both the legislature and the administration have been badly wounded by events of the last year. Public attitudes toward both institutions have been dropping precipitously and their perceived ability to solve the state's budget problems have declined apace.

The governor's proposal to establish a cabinet-level Department of Child Development and Education, an important plank in his election bid, is barely breathing. School districts, faced with ever increasing problems and ever declining resources, question the governor's placing a higher priority, however well intentioned, on categorical programs prior to fully funding the basic support level for schools.

The principal advocate for schools, Superintendent Bill Honig, has been weakened by constant battles with the state board of education, and his credibility has been damaged by allegations, whether true or not, that he personally benefited from his wife's business.

The campaign to defeat the voucher system will be the preeminent issue in 1992, diverting a substantial portion of the education lobby's efforts away from the legislature and the problems that so need to be addressed there. In addition, any statewide voucher initiative campaign is bound to include public school "trashing" messages which could erode public support for public education even more.

Couple these conditions with a continuing stream of negative projections about the state of the economy and one is left with a decidedly bleak outlook. At the close of 1991 the state Commission on Finance projected a two-year budget shortfall ranging between $4.9 million and $7.9 million. If these figures prevail, the 1992 budget battle will bear a striking similarity to the budget battle in 1991. The major difference will be that the context within which these discussions will take place appears to be much less conducive to meaningful resolution. Once again the conclusion has to be that the state will be unable to deal with the growing problems facing education. Once again, the state's education problems are not "on hold." Until the fiscal and governance crises can be resolved, education problems will continue to worsen.

Chapter 3

Student Achievement

On state-specific measures of performance, California state K–12 students show clear evidence of improvement. Since the 1983 beginning of a statewide reform movement, intended to make schools more rigorous and students better learners, reading and mathematics achievement test scores have increased, Scholastic Aptitude Test (SAT) scores and Advanced Placement (AP) course enrollments and test scores have gone up, and the proportion of high school seniors eligible to go to college has grown greatly.

Performance information comparing California to other states and the national average does not reveal as bright a picture. In eighth grade mathematics, California's students score below the national average and, on most dimensions, perform more poorly than their counterparts in other large industrial states. This is particularly true for black and Hispanic students. The average California eighth grade student has only slightly better than fifth grade mathematics proficiency.

INTRODUCTION

There are two principal means for appraising the academic performance of California kindergarten-through-twelfth-grade students. One means is to obtain a direct expression of how much students know or how much they have learned. This is usually done through the medium of achievement tests, and student performance is reflected in test scores. This direct expression of school performance is described in policy circles as being "product" oriented.

A second avenue for determining the performance of students is "process" oriented. Here the appraisal is based on less direct evidence of student knowledge or learning, the extent to which students are engaged in educational and schooling activities that lead to learning. For example, one process measure is derived from students' academic aspirations: Are they staying in school or dropping out? If they are staying in school, what kinds of courses are they taking and are these courses intellectually challenging and academically rigorous? Do they comprise a coherent program leading to college, vocational training, or something else? Are students taking college admission aptitude tests, and, if so, how are they scoring on them? What kinds of grades are they getting in the classes they take?

This chapter provides information on both performance dimensions, "products" and "processes."

"PRODUCT" MEASURES (TEST SCORES) OF CALIFORNIA STUDENT PERFORMANCE

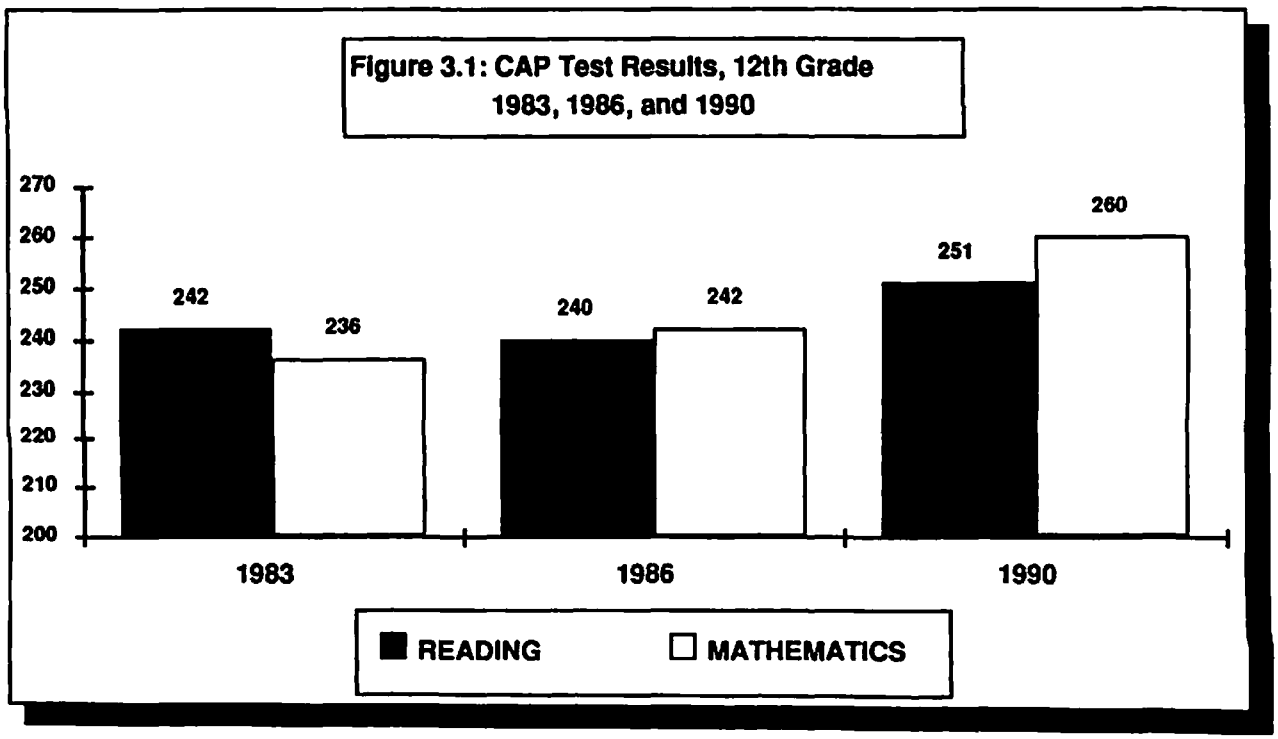
Information about California student performance is limited compared to what policymakers and professional educators ideally desire. Nevertheless, sufficient attention is now being paid to outcome measures for schooling that a reservoir of data is being generated. The majority of these data are California specific, that is they concentrate only on California students, though they may compare California student performance over time. In addition, for the first time in the history of the United States, it is now possible, on a limited dimension, to compare California student performance with that of students from the nation as a whole and with other individual states.

California-Specific Performance

The principal "product" means for appraising the academic performance of California public school students has been achievement examinations administered annually under the California State Education Department's auspices. Funding for the examinations, known as the California Assessment Program (CAP) was deleted from the state's budget in 1989. Financing was restored in the 1992 budget, but because of the lack of funding, statewide examinations were not administered in 1991. Consequently, there are no new CAP scores to report. The overall performance level from the last available year (1990) is provided below for purposes of reference and continuity. However, it is not until 1993 that PACE's *Conditions of Education in California* can continue with new CAP score results.

California Assessment Program Results

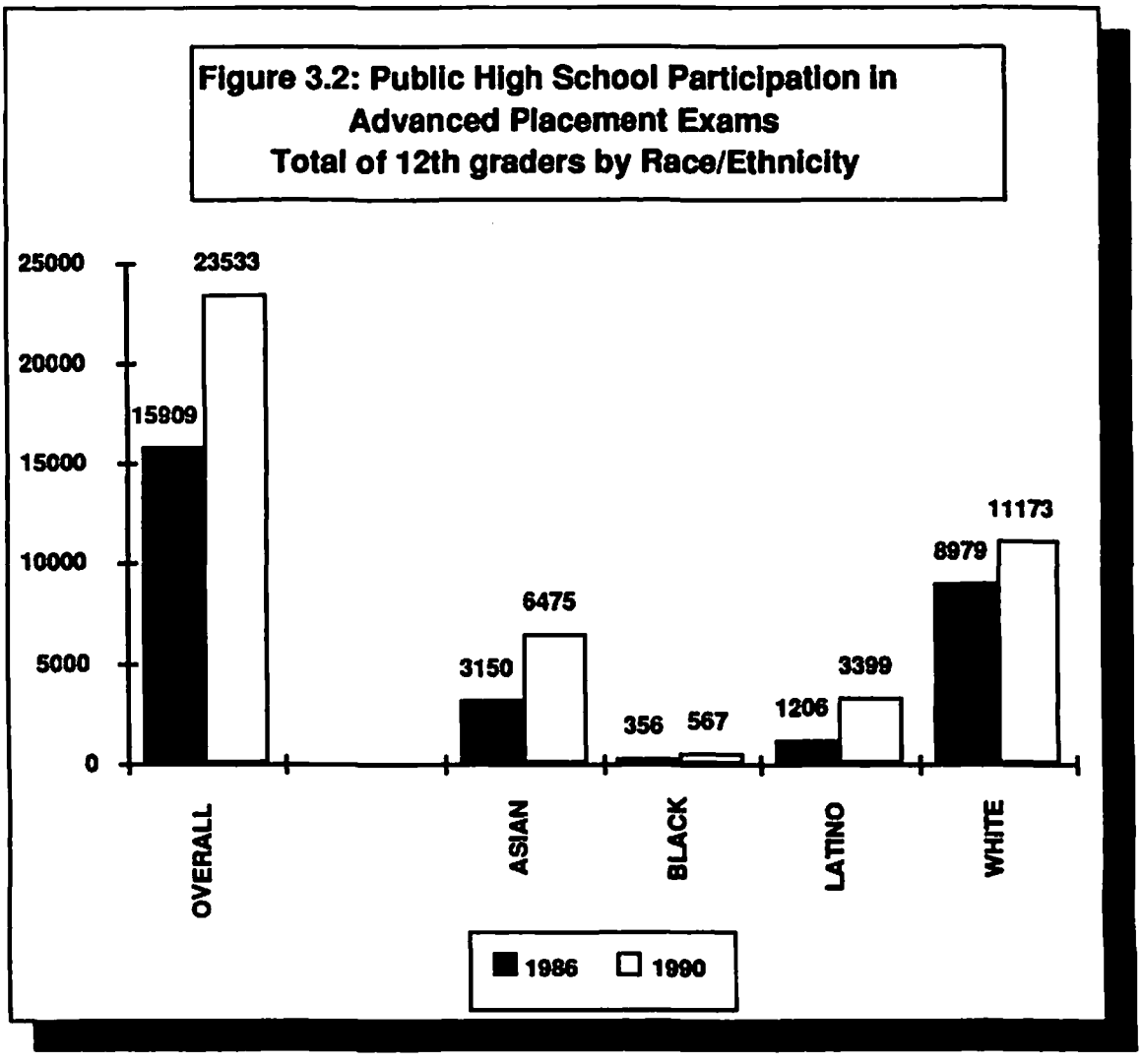
Figure 3.1 displays CAP results for reading and mathematics for twelfth grade students. These results cover the eight years from the inception of the reform movement, 1983, through the last year that CAP was administered (1990). These figures display a substantial increase in mathematics achievement. Indeed, California's average twelfth grader over this eight-year span increased more than one full year in mathematics achievement. Reading results also improved, though not as dramatically.

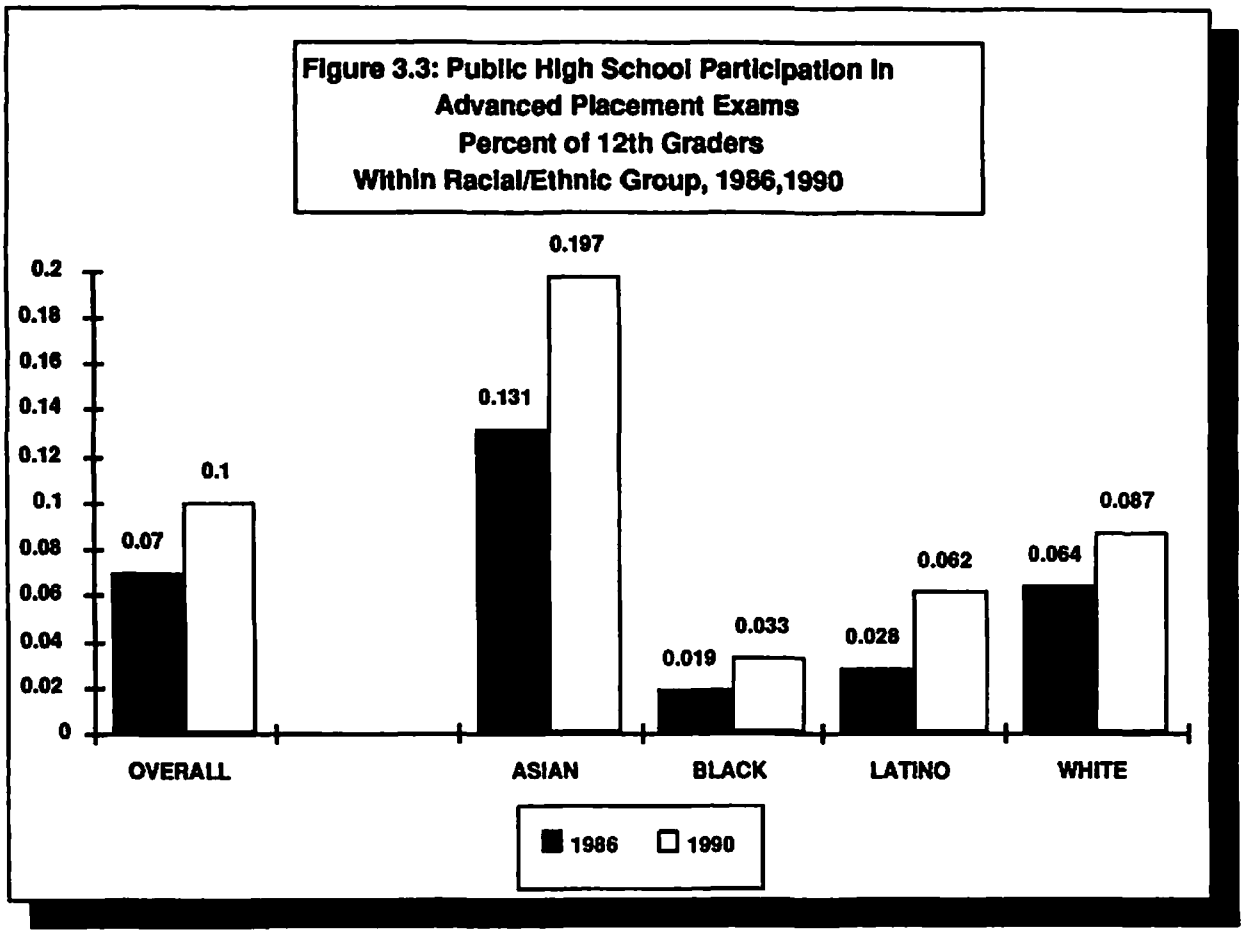


Advanced Placement Results

Figure 3.2 displays the percentages of California's twelfth grade students taking AP examinations in 1990, compared with 1980.[1] These percentages are also categorized by race and ethnicity. Advanced Placement examinations, presumably reflecting student enrollments in AP courses, have increased remarkably. Compared to a decade ago, almost half again as many California twelfth graders now take these rigorous course examinations. Moreover, the increases hold for students in all racial and ethnic categories. The number of Hispanic students has almost tripled, in part a function of the small numeric base beginning in 1980. Nevertheless, the 1990 numbers reflect progress toward greater Latino academic success and are worthy of clear commendation.

Results on the AP dimension for Asian students, reflected in Figure 3.3, are staggering. Almost one out of every five Asian high school seniors takes an Advanced Placement examination. This is twice the average for the entire state.





Scholastic Aptitude Tests

Figure 3.4 displays California twelfth grade total mean SAT scores at four points in time since 1983.

Unlike the CAP and AP tests, the SAT is not intended to be a straightforward measure of academic achievement. Rather, it is classified as an "aptitude" test. The principal difference is that SAT questions are selected not so much from high school subject matter but for their ability to predict a student's likely success during the freshman year of college. Thus, SAT questions, while certainly containing academic content, are deliberately structured to spread test-takers' scores over a normal, or bell-shaped, curve. Prospective test questions that are easily answered by almost every student are typically eliminated from an SAT examination, as are those that are so difficult as to unlikely be answered by any students. An achievement test, in contrast, is comprised of questions that are intended to be linked to the school curriculum and that measure facts and concepts thought to be important for students to master. Achievement tests are not necessarily constructed to have predictive ability.

SAT results, even if not tightly tied to the California high school curriculum, are encouraging. In the eight comparison years, mean scores have improved for the state, and for each racial and ethnic group within the state. Overall scores increased 11 points between 1983 and 1987. Statewide mean totals slipped slightly in 1990, but the overall eight-year picture is still one of improvement. Asian and black twelfth graders increased their scores by 25 points over the time period involved. White students increased by 18 and Hispanics by 6 points.

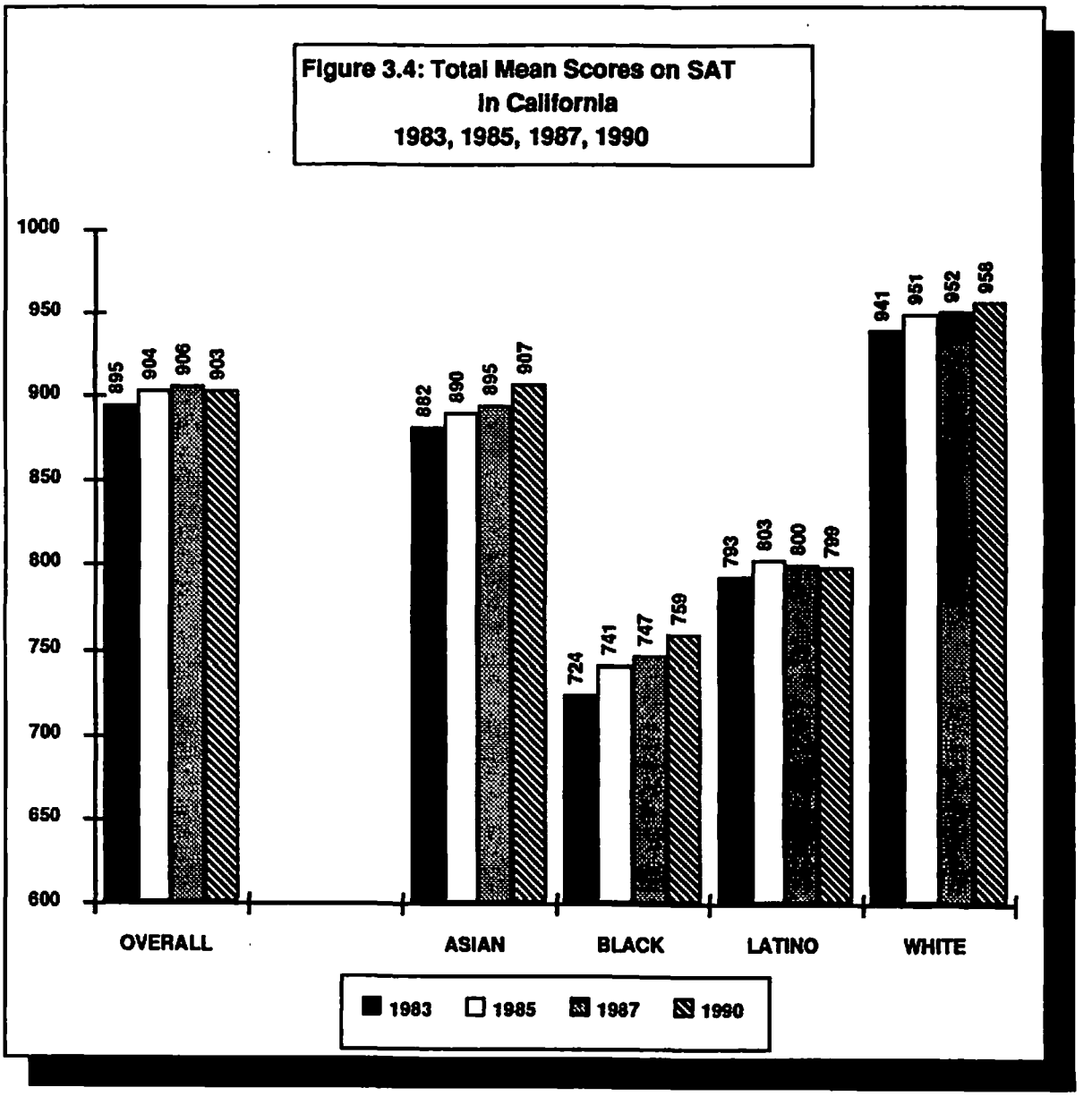


Figure 3.4: Total Mean Scores on SAT
In California
1983, 1985, 1987, 1990
1000
950
900
850
800
750
700
650
600
895
904
906
903
882
890
895
907
724
741
747
759
793
803
800
799
941
951
952
958
OVERALL
ASIAN
BLACK
LATINO
WHITE
1983
1985
1987
1990

Figure 3.5 displays California and national SAT scores for the twenty-year period 1971–72 to 1990–91. These data are provided for further information.

Figure 3.5: Scholastic Aptitude Test Scores: California and the Nation 1971–72 to 1990–91 Public and Private Schools

NATIONAL			CALIFORNIA			
Verbal	Math	Year	Verbal	Math	Number Taking	% Seniors Tested
452	484	1971–72	464	493	91,595	30
445	481	1972–73	452	485	95,206	31
444	480	1973–74	450	484	98,149	32
434	472	1974–75	435	473	106,786	32
431	472	1975–76	430	470	108,644	35
429	470	1976–77	427	470	107,586	35
429	468	1977–78	427	466	111,524	36
427	467	1978–79	428	473	102,595	34
424	466	1979–80	424	472	102,723	34
424	466	1980–81	426	475	100,131	34
426	467	1981–82	425	474	102,261	33
425	468	1982–83	421	474	100,495	33
426	471	1983–84	421	476	102,358	35
431	475	1984–85	424	480	104,585	37
431	475	1985–86	423	481	108,287	38
430	476	1986–87	424	482	117,198	38
428	476	1987–88	424	484	119,784	41
427	476	1988–89	422	484	115,552	41
424	476	1989–90	419	484	112,577	42
422	474	1990–91	415	482	114,716	43

National and Other State Comparisons

Until recently, it was virtually impossible to compare California student achievement with that of students in other states or in the nation as a whole. However, in 1991 the National Assessment of Education Progress (NAEP)[2] undertook an experiment which partially solved this age-old problem. This national testing endeavor concentrated on mathematics and utilized representative samples of eighth grade students from forty states and territories, California being among them. The tests were designed and administered by the Educational Testing Service (ETS) in the fall of 1990 and the compiled results and state-by-state comparisons were released in June 1991.[3]

The NAEP tests, administered to eighth graders in one hundred California public schools, covered five mathematical dimensions suitable for eighth graders to be taught: (a) numbers and mathematical operations such as addition and subtraction, (b) measurement such as feet and inches, (c) geometry such as angles and areas of different shapes, (d) data analysis, statistics, and probability, and (e) algebra and functions.

The examination is constructed so that a student's score can range for "0" to "500." The scores for individual students can be compiled, and averages and distributions for a state can be determined. Additionally, sufficient personal information is collected from each student to enable comparisons to be made within a state for males and females and for students from different ethnic and racial backgrounds. Also, data are collected regarding a number of conditions in the students' home environment and in their schools.

The examination is also categorized into levels of performance proviciency. Figure 3.6 displays the four principal performance levels ranging from an average score of 200 to 350. The mathematics performance level or proficiency of a student, or group of students, with such a score can be determined from Figure 3.6.

Figure 3.7 displays California's average eighth grade mathematics test score and offers a comparison to average scores of the nation, other regions, several industrial states, and the highest scoring state in the nation, North Dakota.

The overall results for the entire nation are disquieting, and California is no exception to the general United States pattern of poor mathematics achievement.

Overall Scores

Figure 3.7 reveals that California not only scores below the national average in eighth grade mathematics, but also scores below the average for every geographic region but the southeastern portion of the United States. Every other state in the western region of the United States, save one, has a higher average score than California, and California also scores below the average for each of the other industrialized comparison states.

Only eight of the participating states, and three territories, score lower than California. The lower scoring states, with the exceptions of Hawaii and New Mexico, are southern states. The three territories are the District of Columbia, Guam, and the Virgin Islands.

Race and Ethnicity

California's average score is 256. Figure 3.8 reveals student subgroup scores for California, the comparison industrial states, and the top scoring state, North Dakota. The four principal subgroups presented here are white, black, Hispanic, and Asian and Pacific Islander students. The average score for each subgroup is listed at the end of the bar, and the percent of the overall student population comprised by the subgroup is displayed within the bar itself.

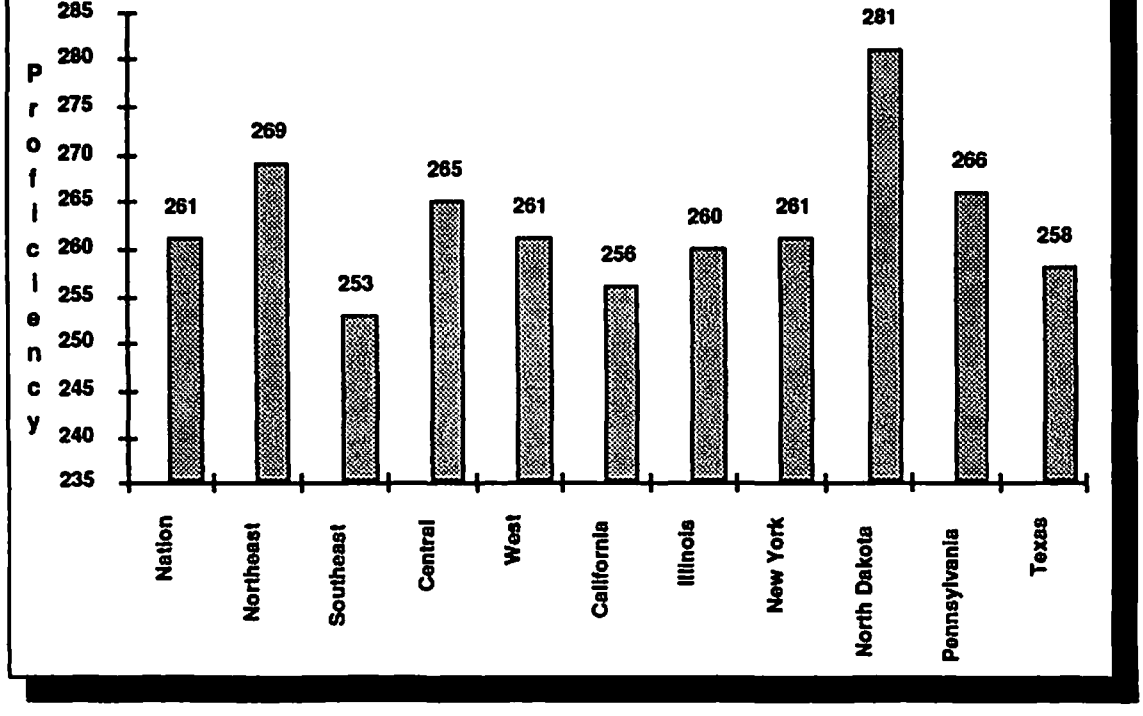
Here can be seen that California's white students scored at 271. This is above the overall national average but at and *generally below the average for this subgroup in the five comparison states.*

Asian/Pacific Island students in California, while having an average score equal to whites, nevertheless *scored lower than their counterparts for the entire nation and for*

Figure 3.6: Overall Mathematics Proficiency, National Samples of 4th, 8th, and 12th Grades

		Grade 4	Grade 8	Grade 12
	Average Proficiency	216(0.7)	265(0.4)	295(1.1)
Level	Description	Percentage of Students at or above		
200	Simple Additive Reasoning and Problem Solving with Whole Numbers	72(1.1)	98(0.4)	100(0.0)
250	Simple Multiplicative Reasoning and Two Step Problem Solving	11(0.6)	67(1.1)	91(0.6)
300	Reasoning and Problem Solving Involving Fractions, Decimals, Percents, Elementary Geometry, and Simple Algebra	0(0.0)	14(1.1)	46(1.4)
350	Reasoning and Problem Solving Involving Geometry, Algebra, and Beginning Statistics and Probability	0(0.0)	0(0.1)	5(0.6)

Figure 3.7: Average Eighth-grade Public School Mathematics Proficiency



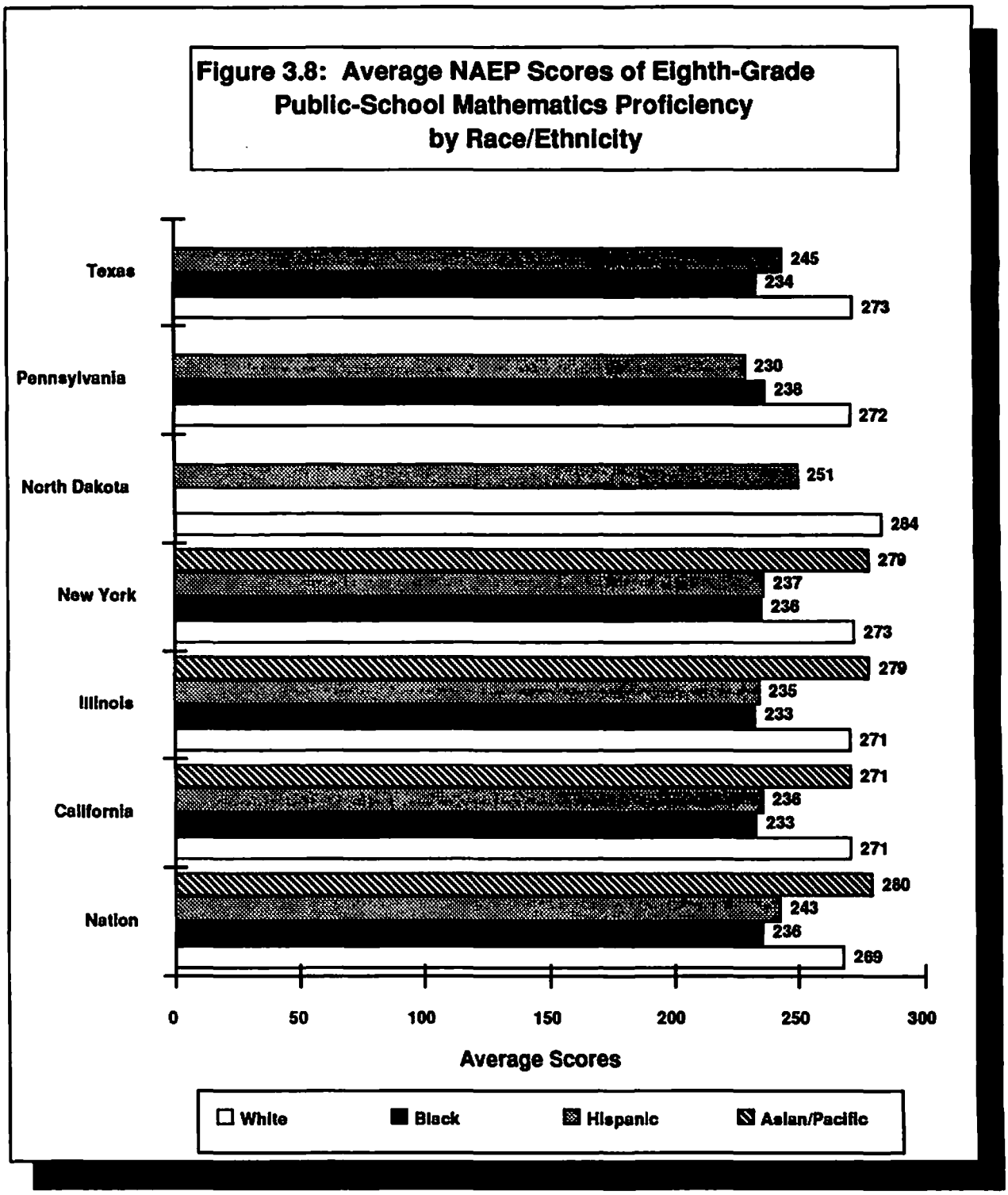


Figure 3.8: Average NAEP Scores of Eighth-Grade Public-School Mathematics Proficiency by Race/Ethnicity
Texas
245
234
273
Pennsylvania
230
238
272
North Dakota
251
284
New York
279
237
238
273
Illinois
279
235
233
271
California
271
236
233
271
Nation
280
243
236
269
0
50
100
150
200
250
300
Average Scores
White
Black
Hispanic
Asian/Pacific

two of the five comparison states. (There is an insufficient number of Asian and Pacific Island students in North Dakota, Pennsylvania, and Texas to justify comparison.)

Black students in California *scored below the overall national average, below the national average for their respective subgroup, and lower than the average for their subgroup in four of the five comparison states.*[4]

Hispanic students in California score below the overall national average, and below their counterparts in Texas and New York. They score higher than eighth grade Hispanic students in Illinois and Pennsylvania. (There is an insufficient number of Hispanic students in North Dakota to justify comparison.)

Gender

Male and female differences are minor in the nation and in California for eighth grade mathematics. The widely reported differences in mathematics between males and females tend to occur at later ages and grade levels. (Indeed, in a few states and in a few mathematic subcomponent areas, females had higher average scores than males.)

Eighth grade California males scored only three points higher than females (258 versus 255). This places males slightly above the state average of 256 and females slightly below. However, both scored below the overall national average. Among those few California students scoring in the high proficiency ranges (300 or above), most, half again as many, were male. However, the percent of either gender category scoring high was quite low. Females fared more poorly than males in the specific area of probability, statistics, and measurement. Here California males were 5 points lower than the national average, whereas females were 9 points lower.

Significance

What do these scores mean about the state of mathematics achievement in California's public schools? So what, if the state's eighth graders, on average, score lower than their peers throughout the nation? The same can be asked even more intensely for black, Hispanic, and Asian and Pacific Island students in California.

NAEP proficiency levels are intended to have commonsense meaning.[5] Level 200 consists of materials that a panel of well-known mathematics experts assert is and should typically be taught in the third grade. This is illustrated by simple additive problems and reasoning using whole numbers.

Level 250 is mathematics material usually covered by the fifth grade. This is simple multiplicative reasoning with two-step problem solving. This latter occurs when the answer for the first portion of a problem is used for the solution to the second portion. For example, if a school bus hold thirty-five pupils, and the Washington Elementary school, with an enrollment of two hundred students needing transport, already owns five buses, how many more buses, if any, will it need?

Level 300—fractions, decimals, percents, elementary geometry and simple algebra—is usually covered by the seventh grade. Level 350 is material typically covered in high school in preparation for the study of advanced mathematics.

Nationally, 64 percent of eighth grade students performed at the fifth grade level. Only 56 percent of California's eighth grade students could perform at the fifth grade level. Fourteen percent of eighth grade students nationally consistently demonstrated a proficiency with level 300 problems, seventh grade mathematics. A slightly lower percent (10–12%) of California's students could perform at the seventh grade level.

By way of comparison, 88 percent of North Dakota eighth grade students, the highest scoring state in the nation, were proficient in seventh grade mathematics. Indeed, 24 percent of North Dakota students were proficient in eighth grade mathematics. Yet clearly, even the nation's best were not all that impressive.

What does all this mean, or at least what does it mean about mathematics achievement in California? These

national data strongly suggest that, whereas California may have been making progress in expecting and obtaining greater performance from its students, it still has a long way to go before even eighth graders can display mastery of grade-level mathematics.

MEASURING STUDENT PERFORMANCE BY "PROCESSES"

Being admitted to college, at least most four-year colleges, requires taking an admission examination such as the Scholastic Aptitude Test. Examination results, usually in combination with grades in a prescribed set of high school academic courses, determine admission eligibility. Hence, measures of the number of high school students taking the SAT, the number enrolling and completing the sequence of college-required academic courses, high school grades, and the percentage of high school students eligible for admission to California's two major four-year college systems, the California State University (CSU) and the University of California (UC), all can be taken as proxy measures of high school student performance.

SAT Percentages

Figure 3.9 displays SAT-takers as a percent of California high school graduates for seven years beginning in 1984 and through 1990. The percentage of seniors taking the SAT is categorized by racial and ethnic group.

Here it can be seen that the overall number of California high school seniors taking the SAT increased slightly, some four or five percentage points, over the time period involved. However, this modest increase masks an important internal shift among black and Hispanic students, whose percentages each increased twelve points. Also, a remarkable 79 percent of Asian students took the SAT in 1987. This figure receded to 70 percent in 1990, which is itself an unusually high figure, more than half again as high as the overall state average.

College Course Taking

Both the UC and CSU systems require a proscribed sequence of academic high school courses for admission eligibility. The CSU requirements, while differing slightly from those of UC, are similar and have been greatly intensified since 1983. Thus, the measure of students taking the UC required sequence is an excellent measure of the extent to which California's education reform efforts are exposing students to a far more rigorous high school experience.

Figure 3.10 displays the percentage of California high school seniors, categorized by racial and ethnic group, who have taken the University of California admission sequence, the so-called "A – F" course. This percent is provided for two points in time, 1986 and 1990. The former was the first year, following enactment of the new and stiffer requirements, that high school seniors were required to have taken such a sequence in order to be eligible for UC admission. In effect, 1986 is a baseline year following enactment of the reform.

Figure 3.10 reveals a slightly higher than 5 percent increase in A – F course-taking in the state overall. However, this increase masks important changes for minority group students. The percent of black students enrolled in the more rigorous program increased by almost 7 points and made up substantial ground on the state average. The story for Hispanic students was less bright, suggesting that far more progress is still needed on this dimension.

High School Grades

The grades awarded by classroom teachers for the academic performance of students in their high school classes are an additional component determining college admission eligibility. To be sure, such grades are lacking in uniformity of a kind represented by standardized college admissions examinations. Nevertheless, because of their high predictive value, grades, or at least their distribution, are a statistic worthy of scrutiny.

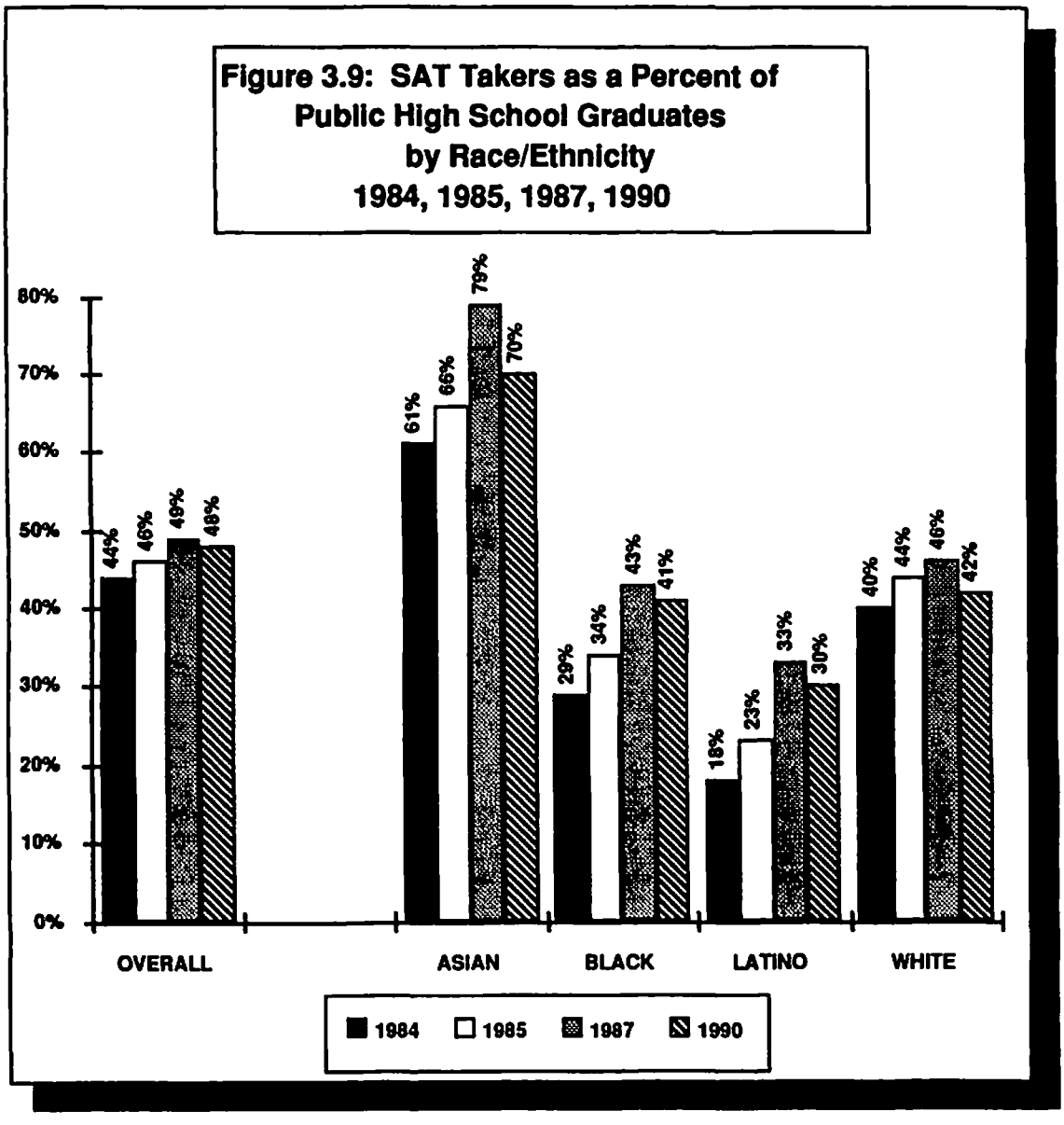


Figure 3.11 displays eight years of average grades for California high school seniors categorized by racial and ethnic group. These grades represent averages over academic courses in 1983, 1986, and 1990. Here it can be seen that grades have not risen dramatically, but have steadily increased for each category of student. Asian student grades have risen the most, almost assuredly reflecting the extraordinary proportion of Asian students taking Advanced Placement courses, grades for which carry a higher point value than for regular high school courses.

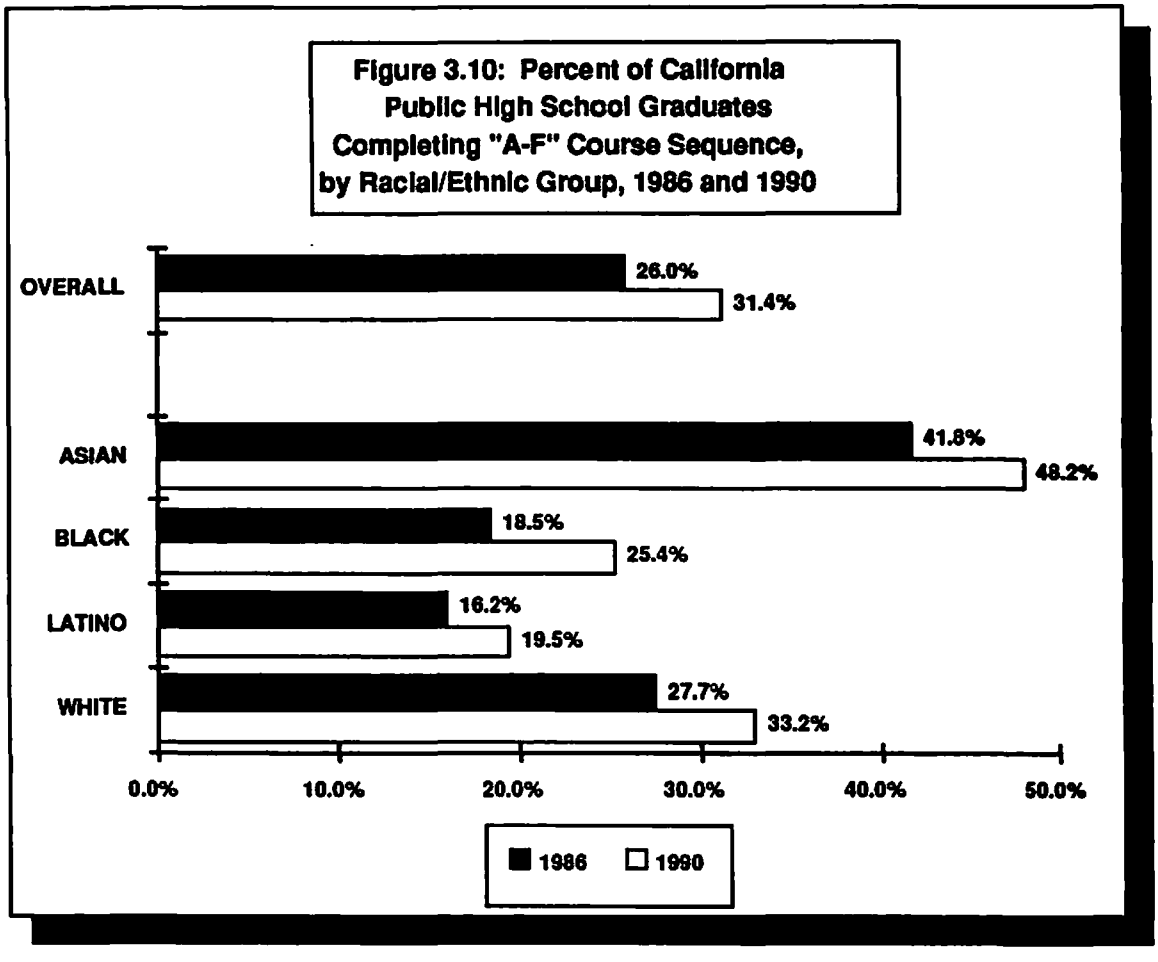


Figure 3.11: Estimated Grade-Point Average of California High School Graduates Based on 10th, 11th, and 12th Year Grades of Studies' Samples, 1983, 1986, and 1990

	1983	1986	1990
Graduates Overall	2.62	2.60	2.68
Asian	2.96	2.96	3.11
Black	2.26	2.29	2.33
Latino	2.42	2.44	2.44
White	2.69	2.65	2.74

Note: Grade-Point average computed on the basis of all course grades in 10th, 11th, and 12th grades, excluding physical education and military science.

Honors course grade of "C" or better earns an additional grade point as of Fall 1985.

College Eligibility

Admission to California's public colleges and universities is determined by high school grades in the previously described academic course sequence and admission test (SAT) scores. According to the California Higher Education Master Plan, originally adopted in 1960 and reaffirmed in 1990, the University of California is expected to admit students from the academically ranked top 12.5 percent of the state's high school graduates and from among the top 33.3 percent in the CSU system.

Figure 3.12 displays eight years of overall eligibility figures, by ethnic and racial grouping, for the University of California. Figure 3.13 provides similar information for California State University system eligibility. Each graphic provides data for 1983, 1986, and 1990.

These two figures reveal remarkable progress in expanding the pool of California high school graduates eligible for admission to the state's four-year colleges and universities. For both the UC and CSU systems the percentages of eligible students have increased for all racial and ethnic groups. More than 40 percent of Asian students are eligible for admission to the University of California and more than 60 percent are eligible for CSU admission. The former increased in eight years from 26 percent and the latter from 49 percent. Black student eligibility for UC increased over the eight years from 3.6 percent to 7.5 percent and from 10.1 percent to 18 percent for CSU admission eligibility. White and Hispanic students, while not recording spectacular gains, nevertheless both increased in their proportions eligible for admission to each institution.

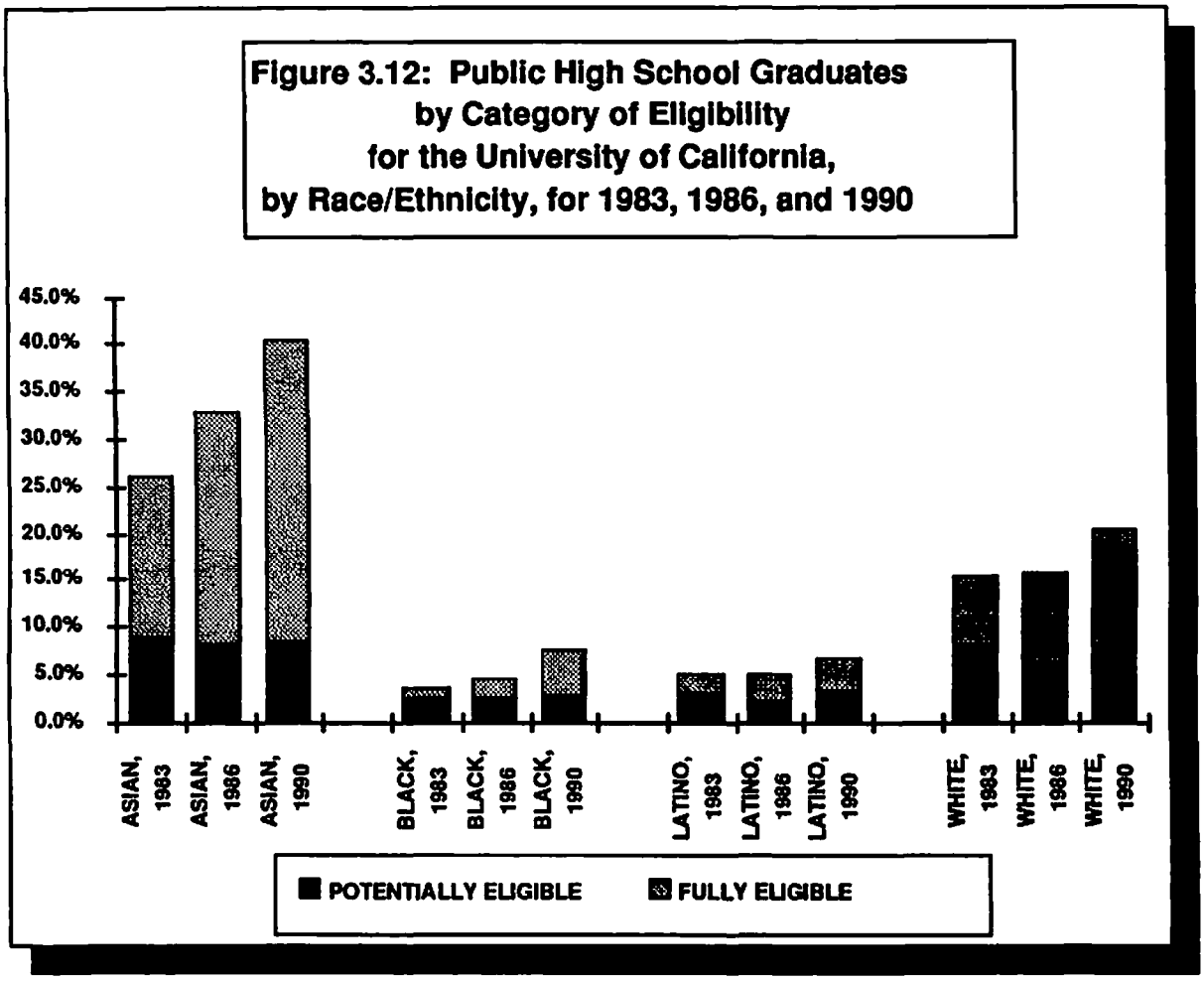
SIGNIFICANCE

The "process" measures of California schooling suggest that the substantial efforts at education reform initiated in 1983 have had results. More students take more rigorous courses, obtain higher grades, take the college admission examination (SAT), and score higher on it. These findings, when coupled with the above-mentioned California Assessment Program test results, suggest that added attention to academic rigor can bear and has borne productive fruit.

However, one cannot read these overall results without retaining a gnawing feeling of discomfort. Despite evidence of progress, there remain many signs that academic performance among California's students is insufficient at best and perhaps unacceptable. When only two-thirds of eighth grade students can exhibit fifth grade proficiency in mathematics, then the need for reform and added effort has not passed.

Two added statistics from the 1991 NAEP examinations are worthy of note in this context. The examination procedures called upon students to note, among other items, the number of days they were absent in the preceding school year and the number of reading items regularly available in their homes. California's eighth graders are absent more than their counterparts in the nation and in any other comparison state. Also, they report fewer reading materials in their homes than their counterparts in other states.

Schools clearly have a large challenge ahead in elevating expectations and student achievement. It appears, however, that parents and communities are also in need of encouragement to contribute their share to the effort.

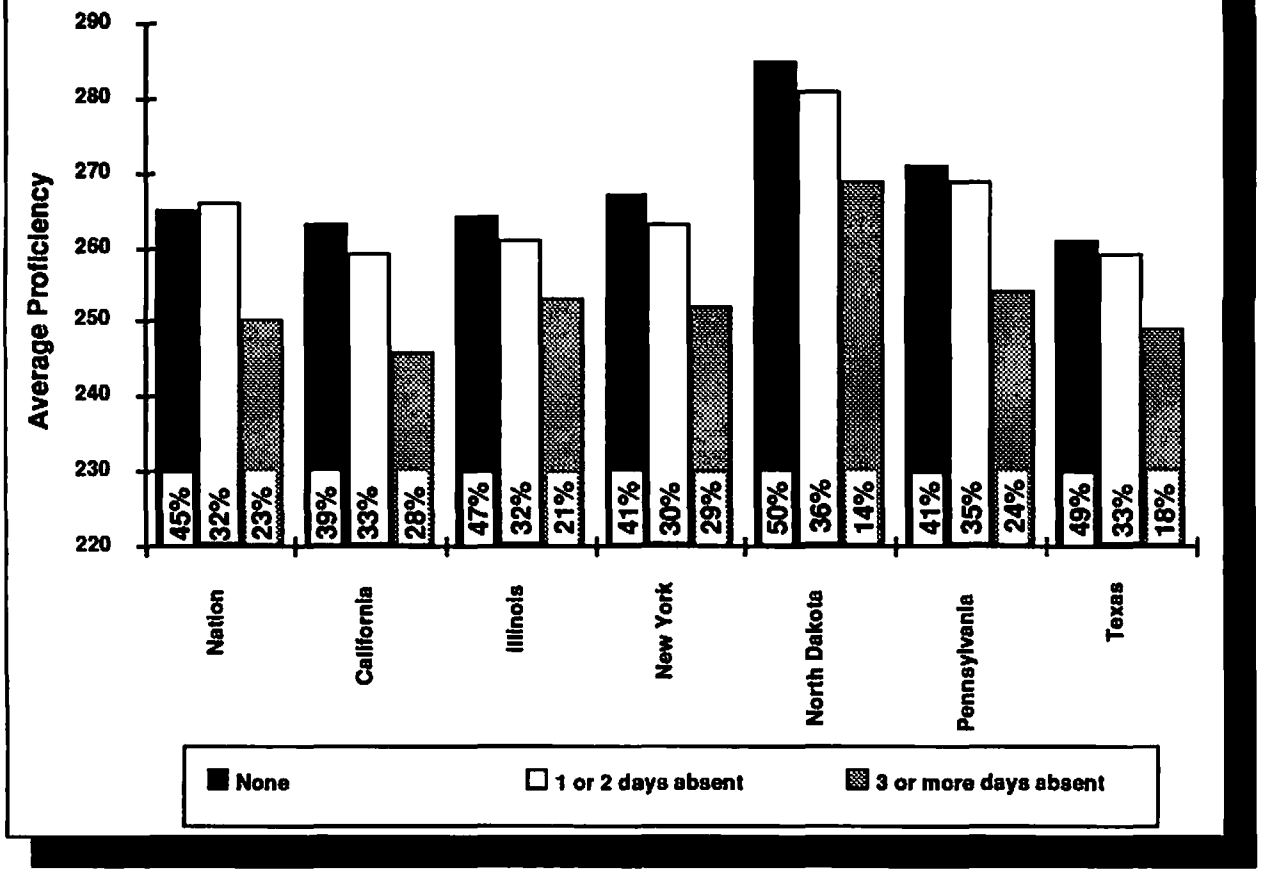


Data for Figure 3.12

	Asian			Black		
	1983	1986	1990	1983	1986	1990
Eligible Pool	*26.0%*	*32.8%*	*40.4%*	*3.6%*	*4.5%*	*7.5%*
Potentially Eligible	81.7%	7.9%	8.2%	2.2%	2.2%	2.4%
Fully Eligible	17.3%	24.9%	32.2%	1.4%	2.3%	5.1%

	Latino			White		
	1983	1986	1990	1983	1986	1990
Eligible Pool	*4.9%*	*5.0%*	*6.8%*	*15.5%*	*15.8%*	*20.5%*
Potentially Eligible	2.8%	1.9%	2.9%	7.8%	5.7%	7.8%
Fully Eligible	2.1%	3.1%	3.9%	7.7%	10.1%	12.7%

Figure 3.13: Math Proficiency Compared to Number of Days Absent, with Percentage of Students in Each Category



Data for Figure 3.13

	Asian			Black		
	1983	1986	1990	1983	1986	1990
Eligible Pool	*49.0%*	*50.0%*	*61.5%*	*10.1%*	*10.8%*	*18.6%*
Index Eligible	12.4%	10.7%	10.8%	4.6%	5.1%	6.8%
Grades Alone	36.6%	39.3%	50.7%	5.5%	5.7%	11.8%

	Latino			White		
	1983	1986	1990	1983	1986	1990
Eligible Pool	*15.3%*	*13.3%*	*17.3%*	*33.5%*	*31.6%*	*38.2%*
Index Eligible	3.6%	3.3%	5.9%	11.4%	10.2%	9.0%
Grades Alone	11.7%	10.0%	11.4%	22.1%	21.4%	29.2%

CONCLUSION

While California data about school performance suggest clear improvement in the last decade, they also suggest that there is a long distance yet to go before the state's public schools achieve at a pace acceptable to the public and useful to the students themselves. This latter condition, the need for continued state improvement, emphasizes the need for expanded measurement of student achievement, both by the state and, in order to gain comparisons, the federal government.

[1] Advanced Placement courses are offered in most of California's high schools for students desiring to take a rigorous exploration of subjects in science, mathematics, history, literature, and foreign language. A high score on the Advanced Placement examination may enable a student to obtain college credit for the class. The score needed to obtain college credit varies by institution. The examinations are designed and administered by the Educational Testing Service (ETS) under contract to the College Entrance Examination Board (CEEB).

[2] A federally funded achievement testing endeavor which has operated nationally since 1966. However, 1990 marked the first time that it undertook a sampling procedure which, in addition to enabling test results to be generalized to the nation as a whole, permitted generalization to the performance of students in an entire state and valid comparisons of the performance of students in one state with that of students in other states.

[3] See *The State of Mathematics Achievement: NAEP's 1990 Assessment of the Nation and Trial Assessment of the States*, National Center for Education Statistics, 1991.

[4] The exception to this statement is white students in California and Illinois tied with average scores of 271.

[5] The exception is the comparison with black students in Illinois with which California black students are tied with an average test score of 233.

[6] The proficiency levels and the reliability of subportions of the examination have come in for criticism by a special investigation conducted by the General Accounting Office (GAO) and the National Assessment Governing Board. (See the following publication for added detail: March 11, 1992 communique to William D. Ford and Dale E. Kildee—GAO/PEMD–92–22R National Assessment Technical Quality.) The National Council of Teachers of Mathematics and other agencies and individuals will continue their efforts to polish the test. This is a technical thicket and the issues are unlikely to be resolved quickly.

NOTES

Chapter 4

Enrollment

Enrollment in California schools is growing by staggering proportions. In 1990–91, 4,950,474 students—one out of every eight students in the United States—were enrolled in California's public schools. Put another way, California's total enrollment is equal to the total cumulative enrollments of 20 other states.

Nearly 30 percent of students new to the nation's schools are arriving in California classrooms. By the end of the 1991–92 school year, California will become the first state to serve more than 5 million students in its public school system. By 2001, California public school enrollment will top 7 million students.

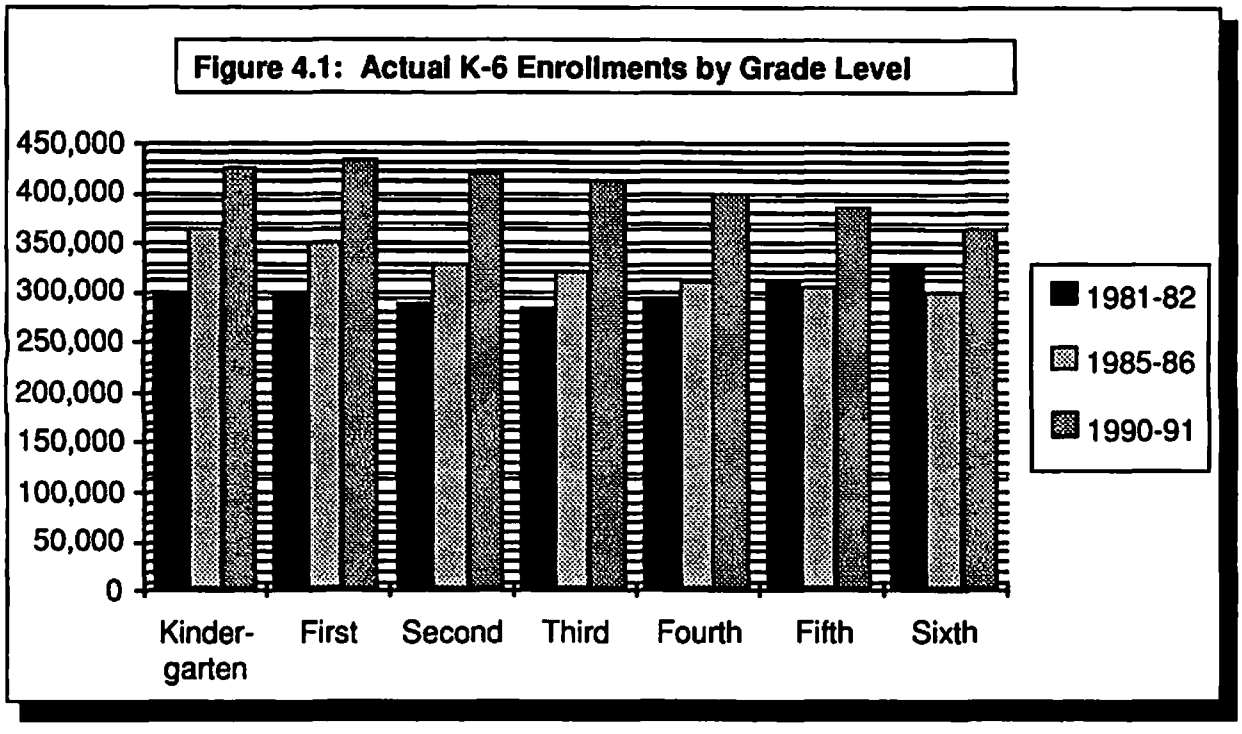


Figure 4.1: Actual K-6 Enrollments by Grade Level
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
Kinder-garten
First
Second
Third
Fourth
Fifth
Sixth
1981-82
1985-86
1990-91

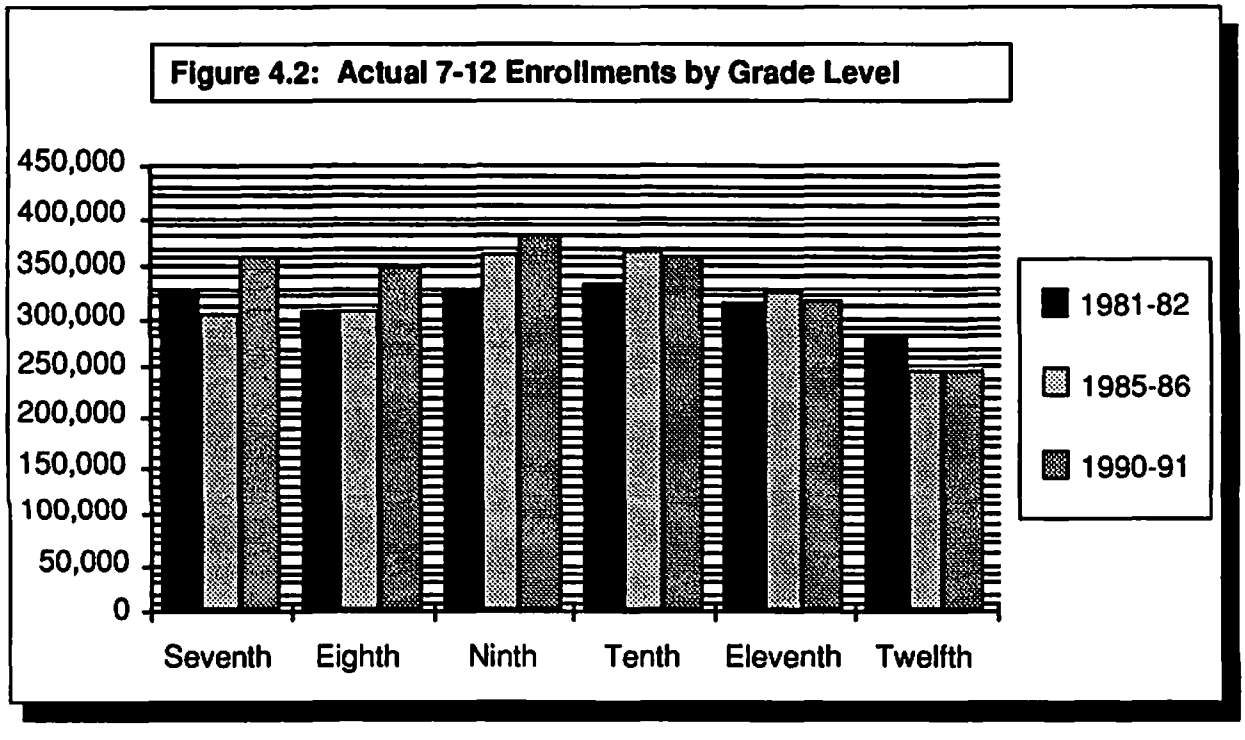
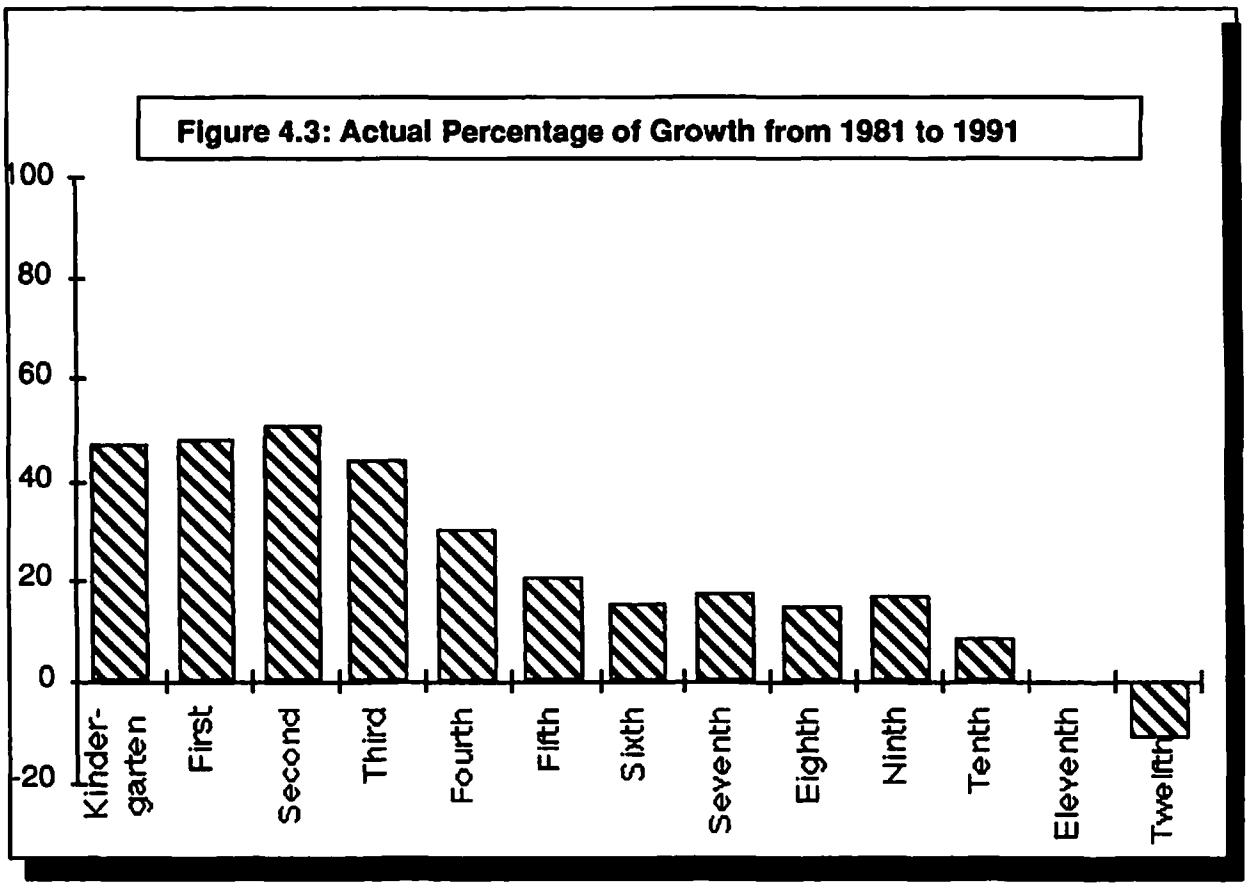


Figure 4.2: Actual 7-12 Enrollments by Grade Level
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
Seventh
Eighth
Ninth
Tenth
Eleventh
Twelfth
1981-82
1985-86
1990-91



Figures 4.1, 4.2, and 4.3

- Enrollment increased by nearly four percent (3.7%) in 1990–91 over 1989–90.

- For the first time in two decades, every grade level, kindergarten through twelve, experienced an enrollment increase in 1990–91.

- Between 1981 and 1991, elementary enrollment (grades K–6) increased 30 percent. This growing wave of students will arrive at the secondary schools (grades 7–12) throughout the decade of the 1990s.

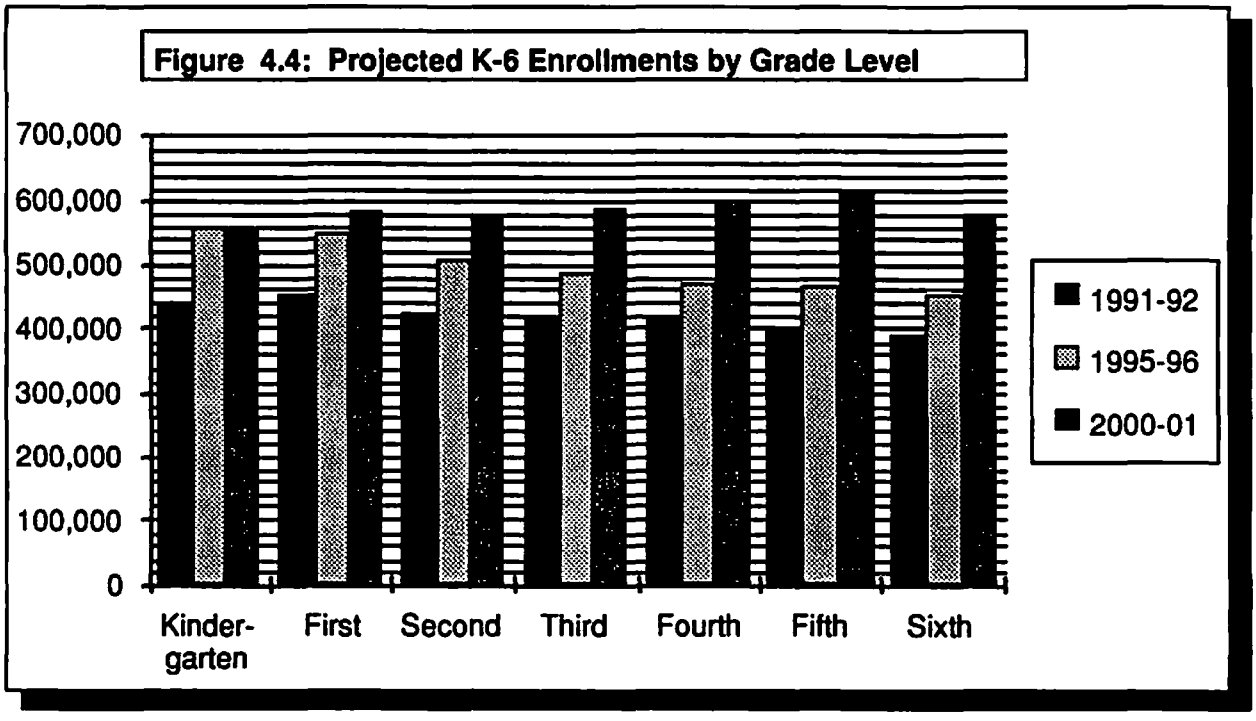


Figure 4.4: Projected K-6 Enrollments by Grade Level
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Kinder-garten
First
Second
Third
Fourth
Fifth
Sixth
1991-92
1995-96
2000-01

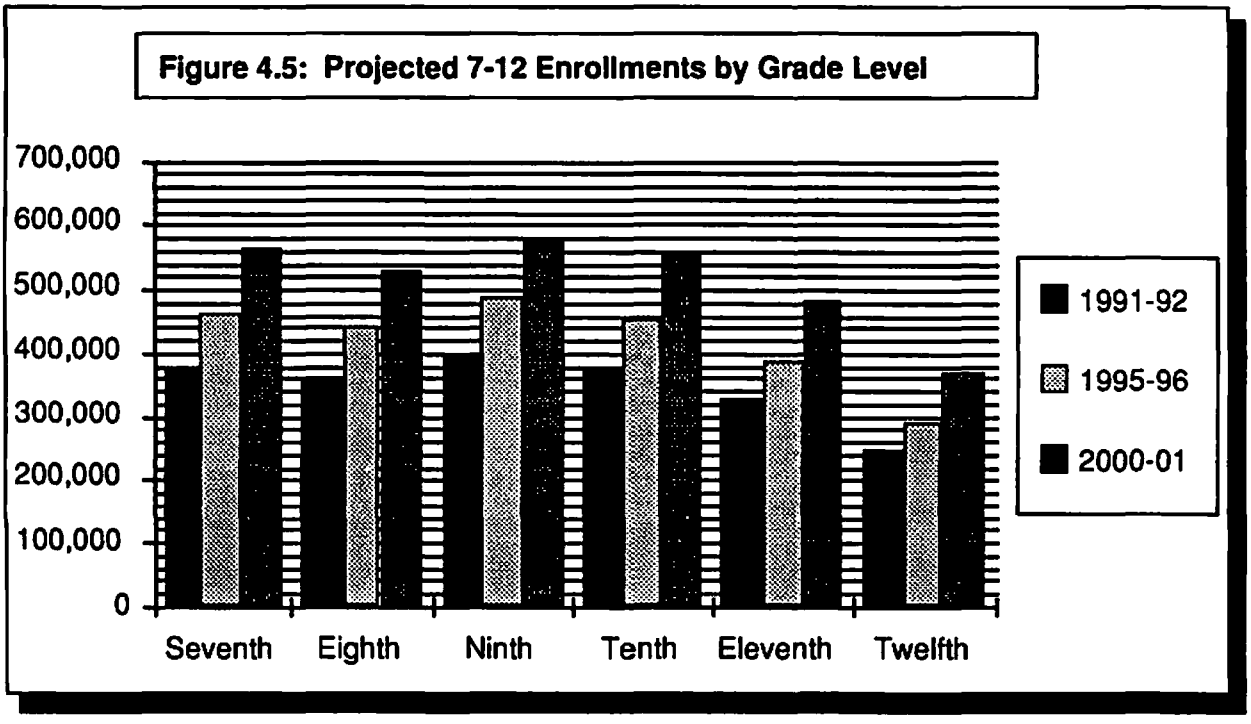
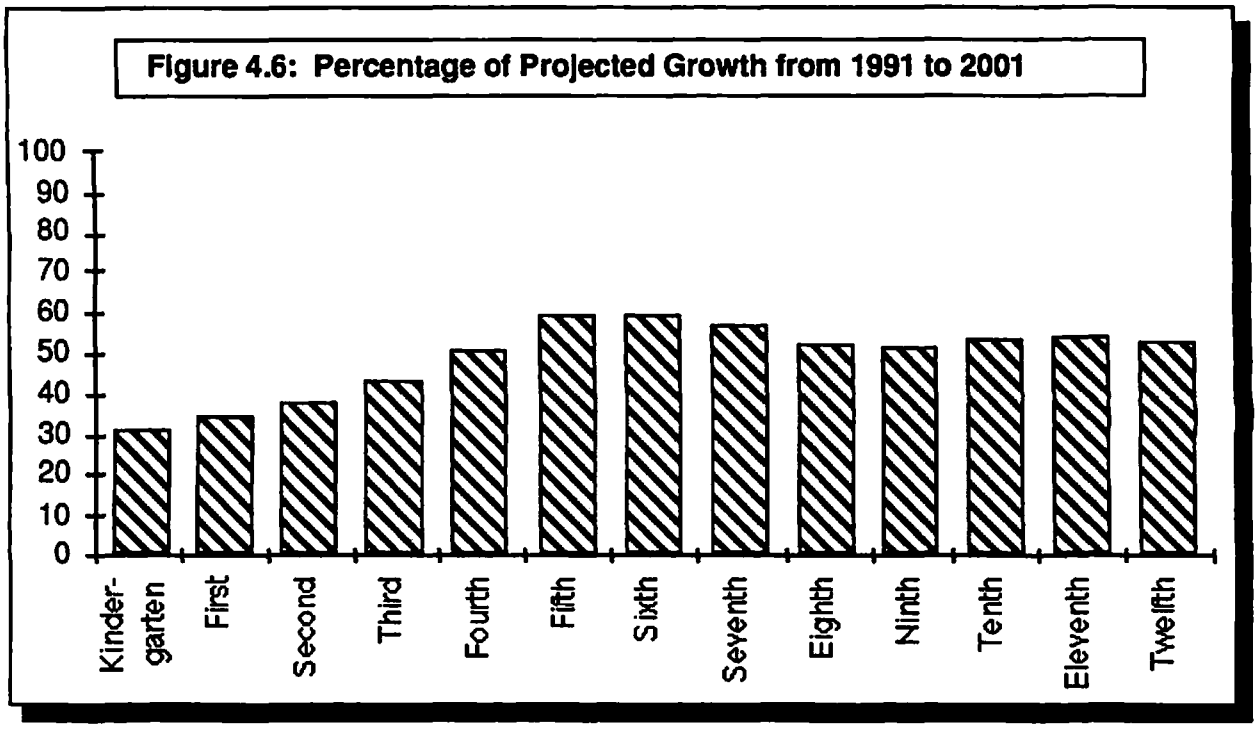


Figure 4.5: Projected 7-12 Enrollments by Grade Level
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Seventh
Eighth
Ninth
Tenth
Eleventh
Twelfth
1991-92
1995-96
2000-01

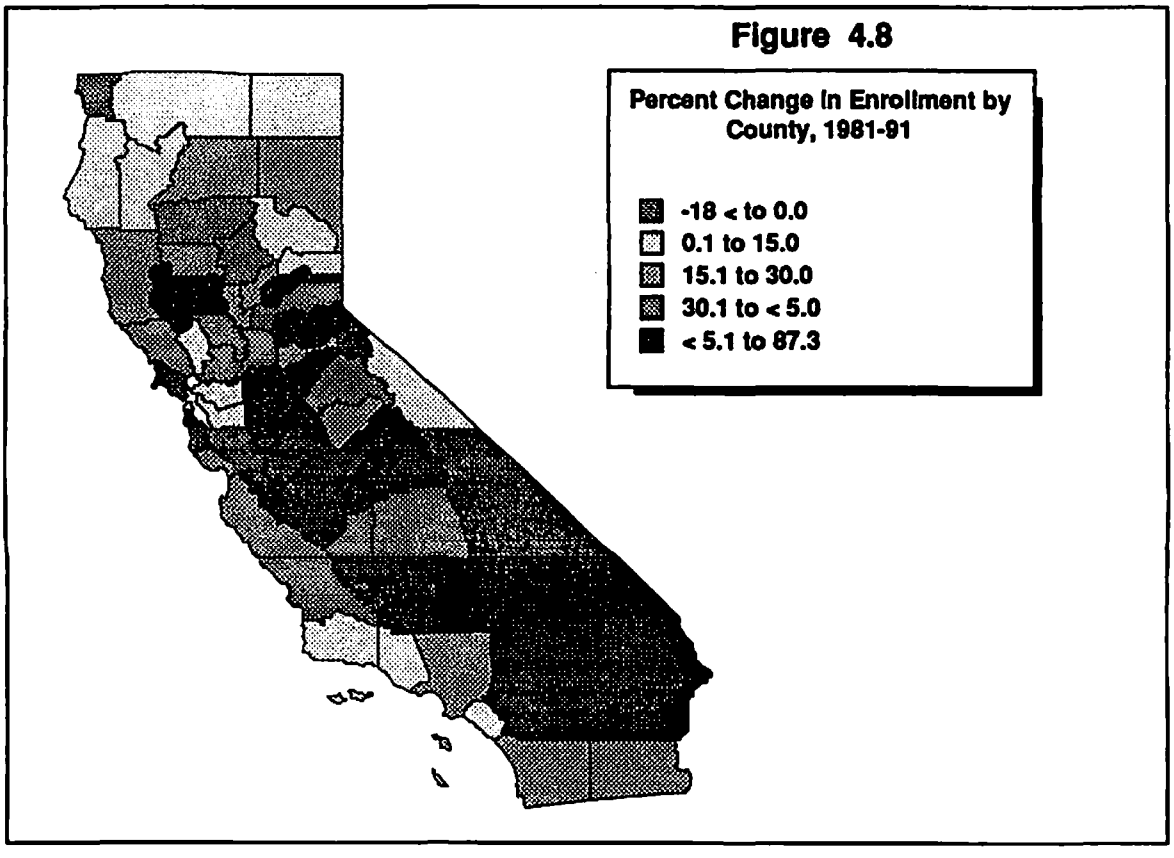


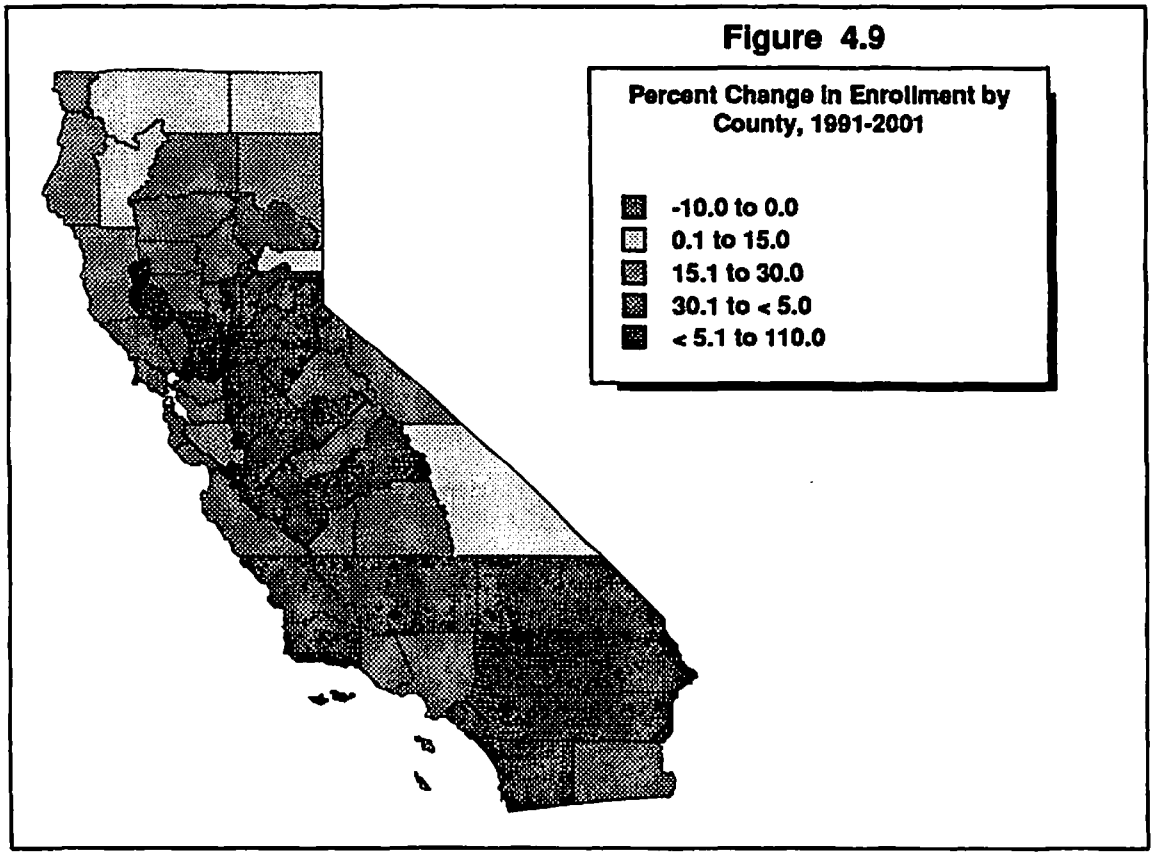
Figures 4.4, 4.5, 4.6, and 4.7

- 650 new students enter California public schools each day.
- Enrollment is projected to grow by at least 4 percent each year between 1991 and 2001.
- By 2001, California public school enrollment will top 7 million students.

Figure 4.7: Actual and Projected Enrollment		
Grade Level	**Actual Enrollment**	**Projected Enrollment**
Kindergarten	423,740	554,012
First	432,694	582,487
Second	419,469	577,690
Third	409,839	588,296
Fourth	399,293	600,874
Fifth	384,483	613,553
Sixth	363,538	579,822
Seventh	359,008	561,712
Eighth	347,479	527,721
Ninth	381,573	576,031
Tenth	361,594	553,403
Eleventh	315,322	484,370
Twelfth	244,142	371,492
TOTALS:	4,842,174	7,171,463

Figure 4.8





Figures 4.8 and 4.9

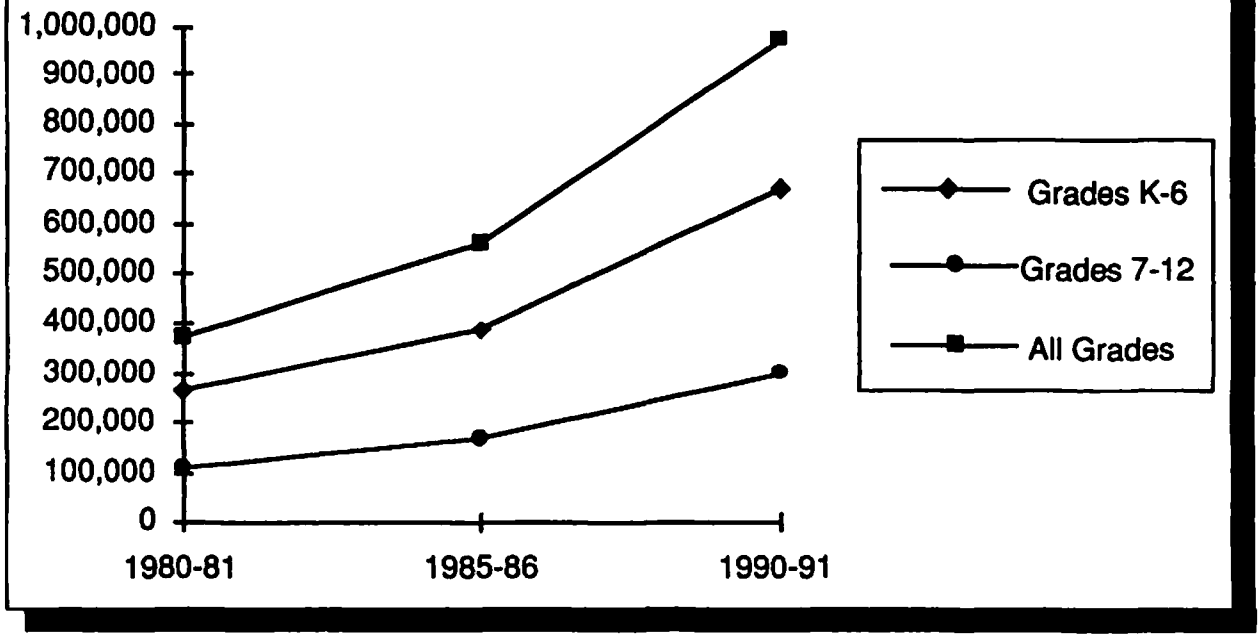
- Between 1981 and 1991, enrollments increased most rapidly in southern counties, which now educate 55 percent of the state's public school students.

- In percentage terms, enrollments are rising most rapidly in Riverside, San Bernardino, and Calaveras counties, and declining in Marin, San Mateo, and Santa Clara counties.

- Between 1991 and 2001, southern California counties are expected to grow at an average annual rate of 4.4 percent, northern counties at 3.9 percent, central and coastal counties at 3.8 percent, and the Bay Area at 2.9 percent.

- The fastest growing counties, in terms of student enrollment percentages, in the next decade will be San Bernardino, El Dorado, and Stanislaus; the slowest growing will be Alpine, Inyo, Modoc, and Sierra.

Figure 4.10: Limited-English Proficient Enrollments from 1980-1991



Figures 4.10 and 4.11

- Since 1980–81, limited-English-proficient (LEP) enrollments have increased five times as fast as general enrollments.

- LEP students now comprise 20 percent of California's total school population.

- One in four students in grades K–6 is limited-English-proficient, as is one in seven students in grades 7–12.

- Spanish is the primary language of nearly three of every four LEP students in California.

Figure 4.11: Distribution of Limited-English Proficient Students by Primary Language in 1990-91

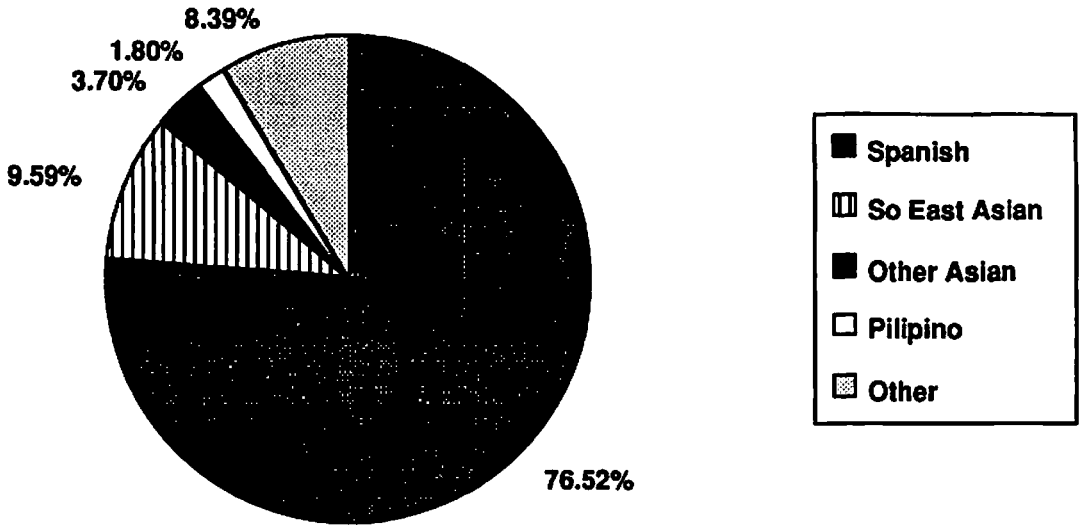
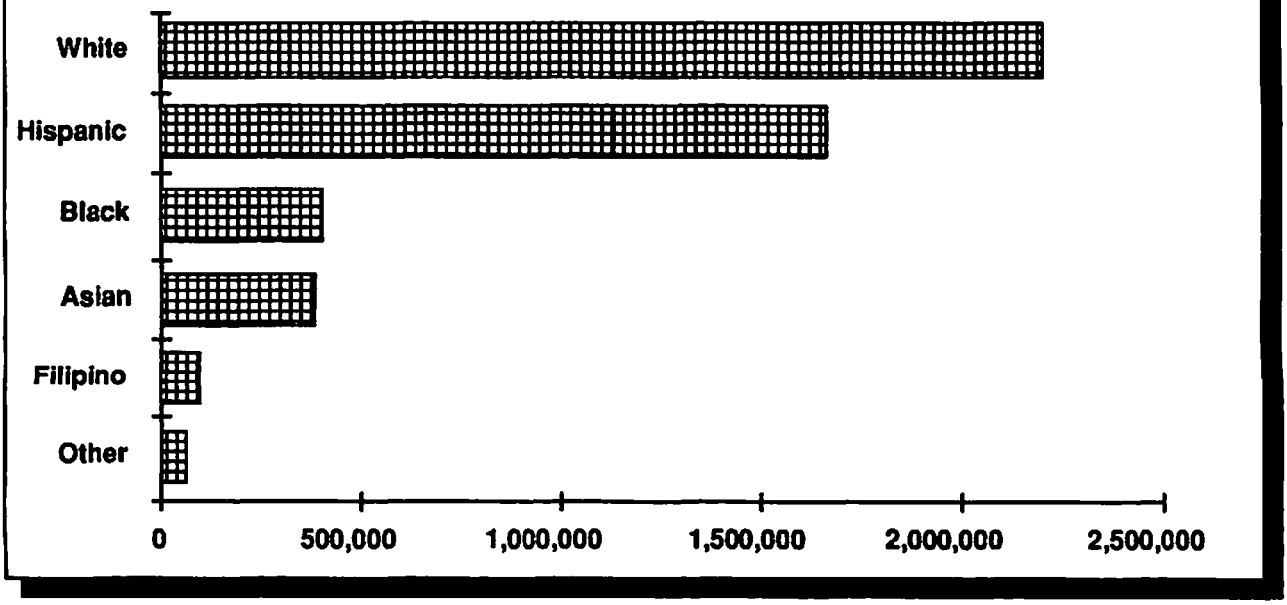
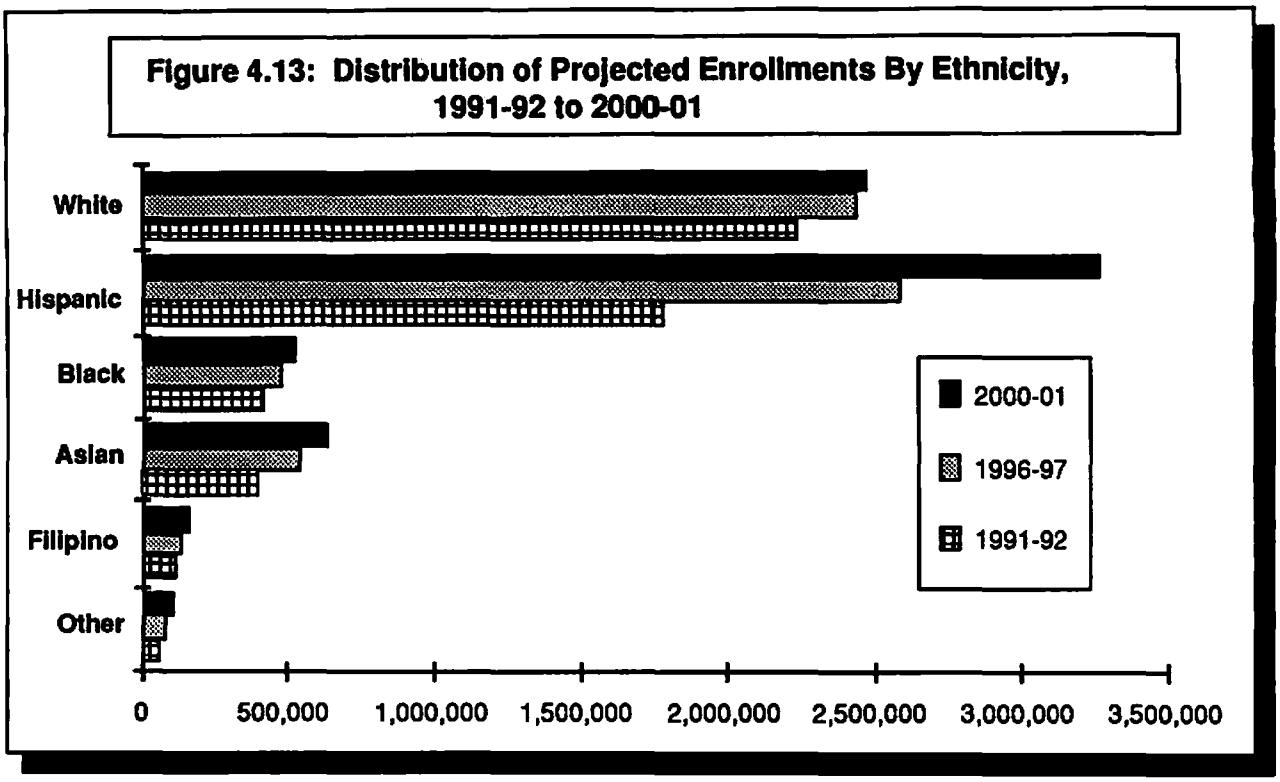


Figure 4.12: Distribution of Actual Enrollments by Ethnicity, 1990-91





Figures 4.12 and 4.13

- In 1990–91, California's student population increasingly became a "majority minority."

- Whites make up less than half of the enrollment (45.7%) in California schools. Hispanics comprise slightly more than a third (34%), Asians nearly 8 percent (7.9%), blacks just under 9 percent (8.8 %), and American Indian, Filipino, and Pacific Islander the remaining 3.5 percent.

- Hispanic enrollments are projected to increase most rapidly during the next decade, while the white population will continue to decline. By the year 2001, the state's student population will be 45.5 percent Hispanic, 34.5 percent white, 9 percent Asian, 7.4 percent black, and 3.7 percent American Indian, Filipino, and Pacific Islander.

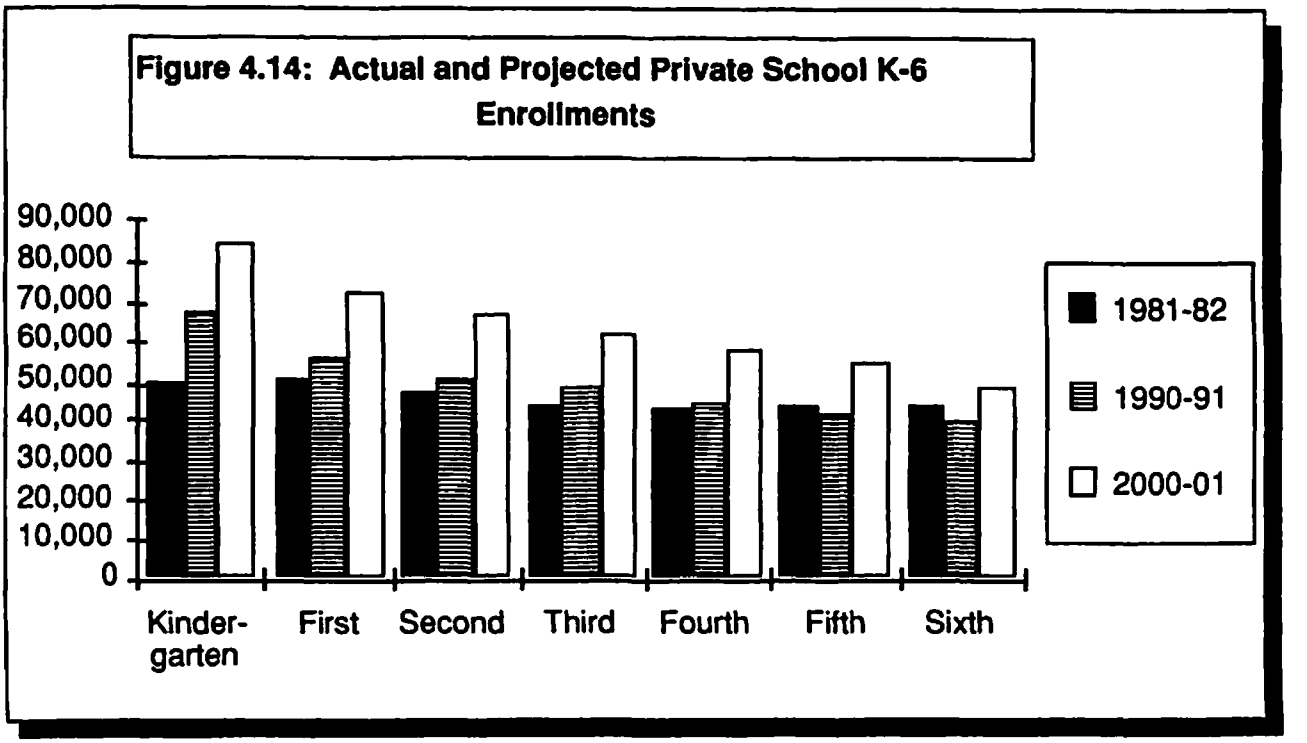


Figure 4.14: Actual and Projected Private School K-6 Enrollments
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Kinder-garten
First
Second
Third
Fourth
Fifth
Sixth
1981-82
1990-91
2000-01

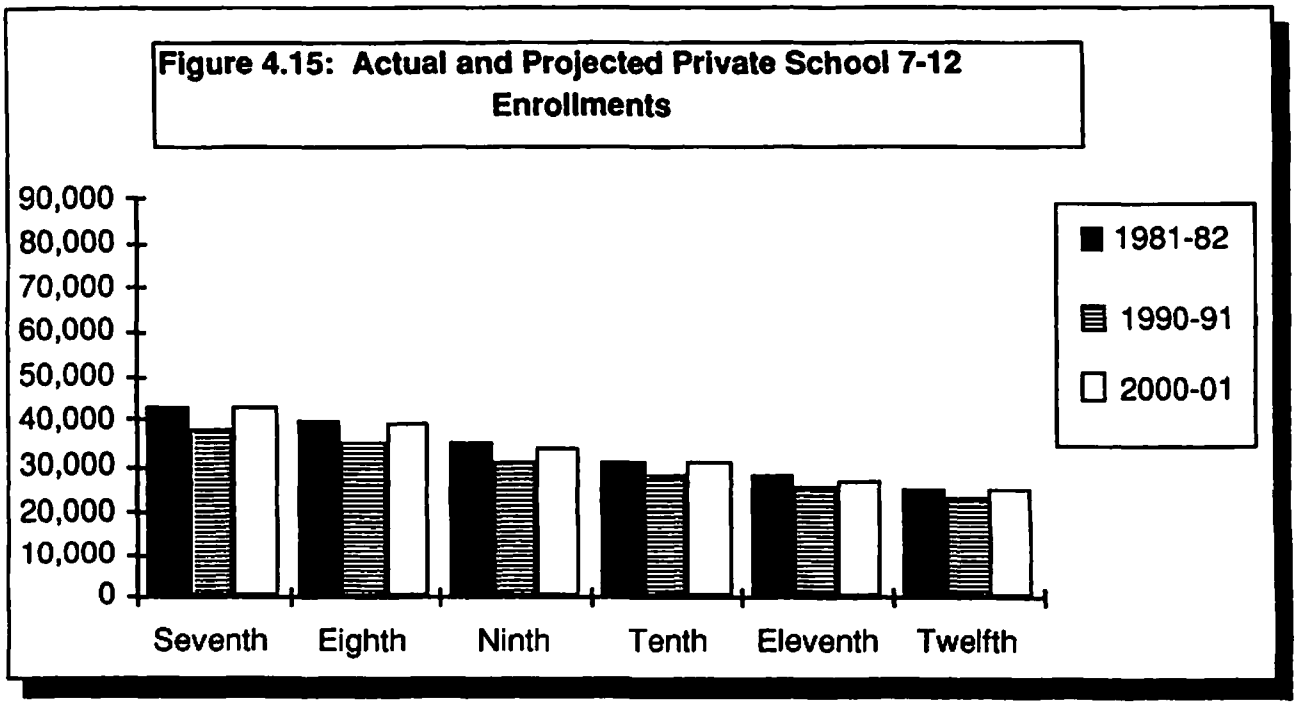
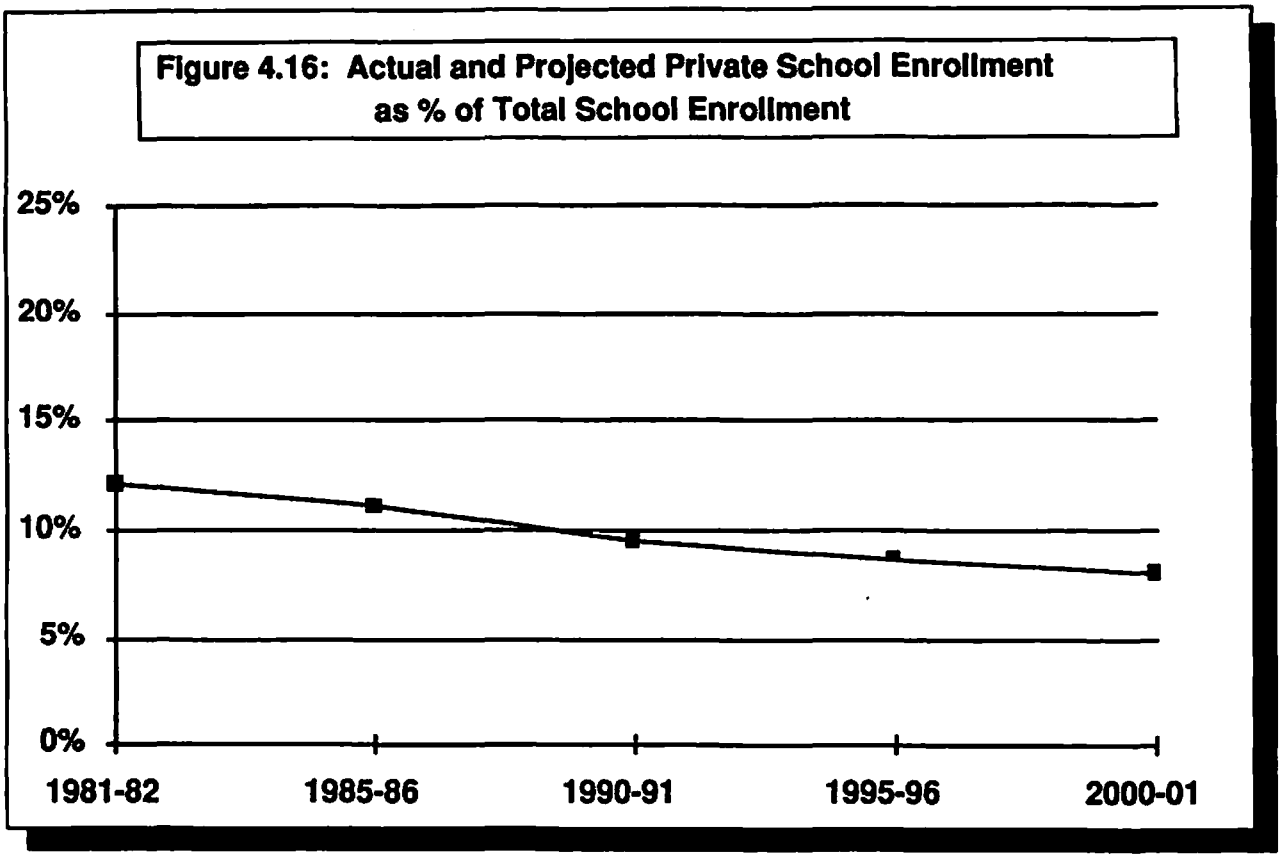


Figure 4.15: Actual and Projected Private School 7-12 Enrollments
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Seventh
Eighth
Ninth
Tenth
Eleventh
Twelfth
1981-82
1990-91
2000-01



Figures 4.14, 4.15, and 4.16

- Private schools educated nearly 10 percent (9.7%) of the state's school-age children in 1990–91.

- Private school enrollments are projected to grow at a rate of two percent a year for the next decade.

- Given that public school enrollments are expected to increase annually by 4 percent, private school enrollments will decline as a percentage of total school enrollment in California.

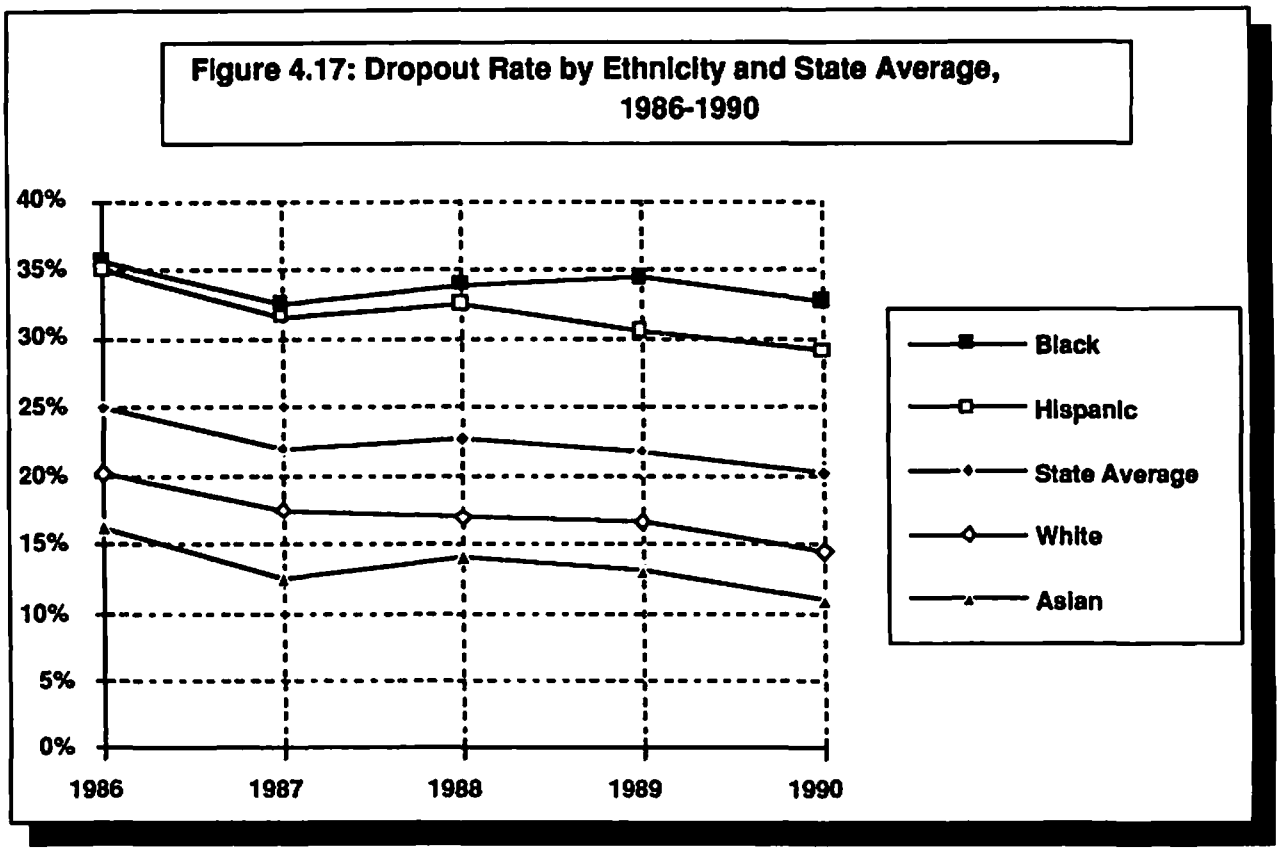


Figure 4.17

- Dropout figures statewide declined by nearly 20 percent (19.2%) between 1986 and 1990.

- During these four years, the dropout rate for white students declined by 28.7 percent, for blacks by 8.1 percent, for Hispanics by 16.8 percent, and for Asians by 33.1 percent.

- The state's dropout rate, however, remains high—14.4 percent for whites, 32.8 percent for blacks, 29.1 percent for Hispanics, and 10.9 percent for Asians, for a statewide average of 20.2 percent.

Sources for Chapter 4

Figures 4.1 - 4.18

Enrollment statistics are collected each year by the California State Department of Education through the California Basic Educational Data System (CBEDS) survey which is filled out by most teachers and selected school administrators each October. The annual CBEDS report forms what is regarded as the definitive historical data base for information on enrollments.

The California State Department of Education does not forecast enrollments. However, the California Department of Finance's Demographic Research Unit does project enrollments based upon exhaustive analysis of various factors. The Department of Finance's projections are regarded as authoritative by virtually all education researchers having need of future trend information.

NOTES

Chapter 5

Finance

Even though state government is struggling with a severe budget deficit, it nevertheless contributes the major share of K–12 school revenues. Local revenue-raising ability remains limited by a series of court decisions and state constitutional amendments. Moreover, school funding gains of the 1980s are currently being swamped by the state's overwhelming enrollment growth. The nation's highest-spending industrial state, New York, allocates $110,000 more per classroom than does California.

Between one-quarter and one-third of California's education budget is appropriated for categorically funded programs. Special education consumes by far the largest share of categorical dollars.

Figure 5.1 Total K-12 Education Revenues, Nominal and Real, 1982-83 to 1991-92

	TOTAL FUNDING (a)				1982-83 DOLLARS	
Year	Total Funding (in millions)	ADA	Per ADA	Percent Change	Per ADA	Percent Change
1982-83	12,660.8	4,231,431	2,992	0.2	2,992	-4.4
1983-84	13,575.1	4,260,873	3,186	6.5	3,046	1.8
1984-85	15,250.8	4,352,597	3,504	10.0	3,198	5.0
1985-86	17,085.0	4,469,821	3,822	9.1	3,360	5.1
1986-87	18,534.8	4,611,637	4,019	5.2	3,425	1.9
1987-88	20,230.6	4,722,792	4,284	6.6	3,497	2.1
1988-89	22,224.4	4,871,916	4,562	6.5	3,549	1.5
1989-90	24,043.4	5,050,944	4,760	4.3	3,542	-0.2
1990-91	25,354.6	5,249,175	4,830	1.5	3,439	-2.9
1991-92	26,933.2	5,434,015	4,938	2.2	3,373	-1.9
CUMULATIVE CHANGE						
Amount	14,272.4	1,222,584	1,946	***	381	***
Percent	112.7%	28.9%	65.0%	***	12.7%	***

Figure 5.1

- In 1991–92, California spent $26.9 billion on K–12 education.
- Between 1982–83 and 1991–92, spending for K–12 schools more than doubled. However, when corrected for inflation and enrollment growth, actual per-pupil spending increased only 12.7 percent.

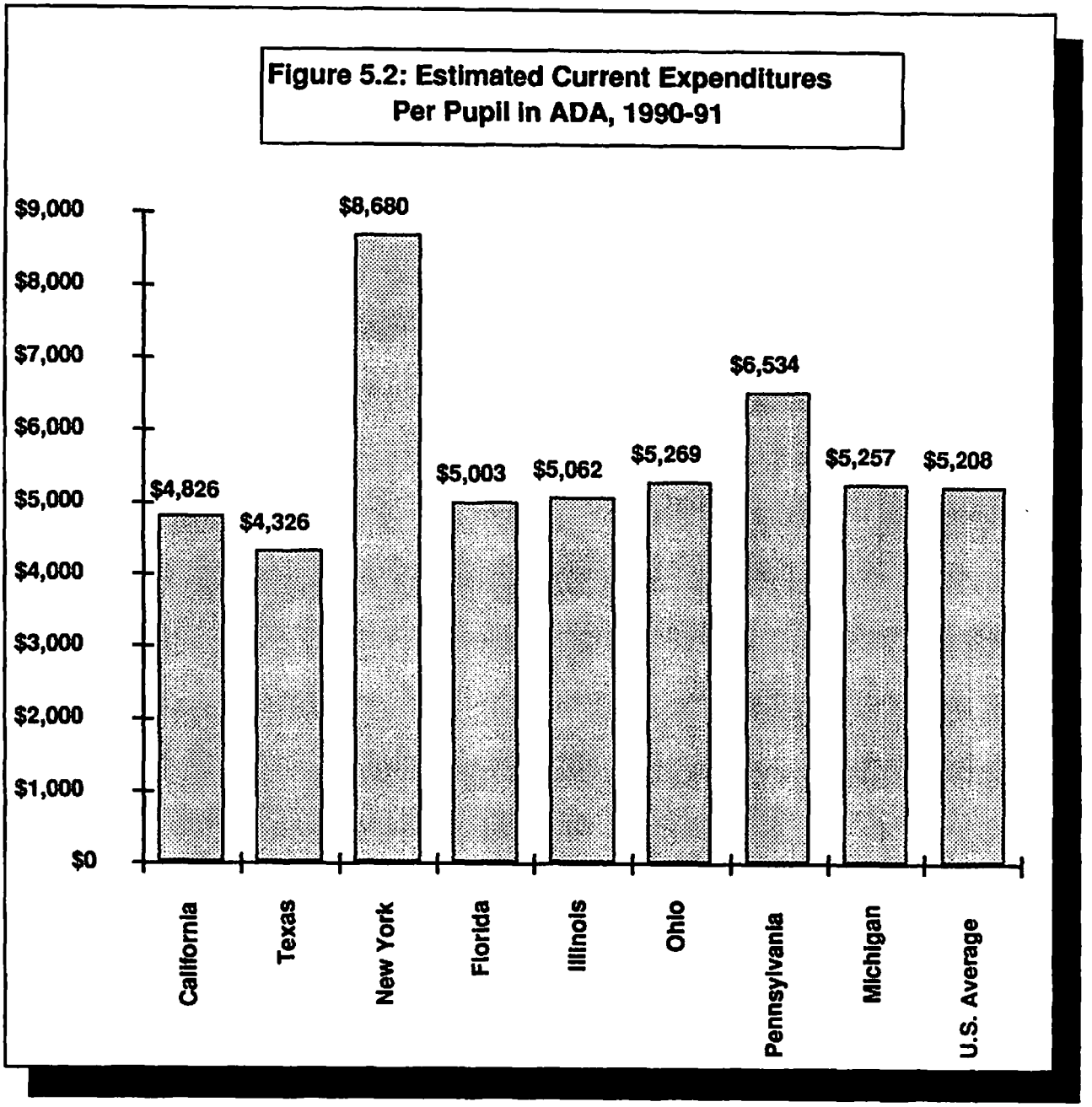


Figure 5.2: Estimated Current Expenditures
Per Pupil in ADA, 1990-91
$9,000
$8,000
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
$4,826
$4,326
$8,680
$5,003
$5,062
$5,269
$6,534
$5,257
$5,208
California
Texas
New York
Florida
Illinois
Ohio
Pennsylvania
Michigan
U.S. Average

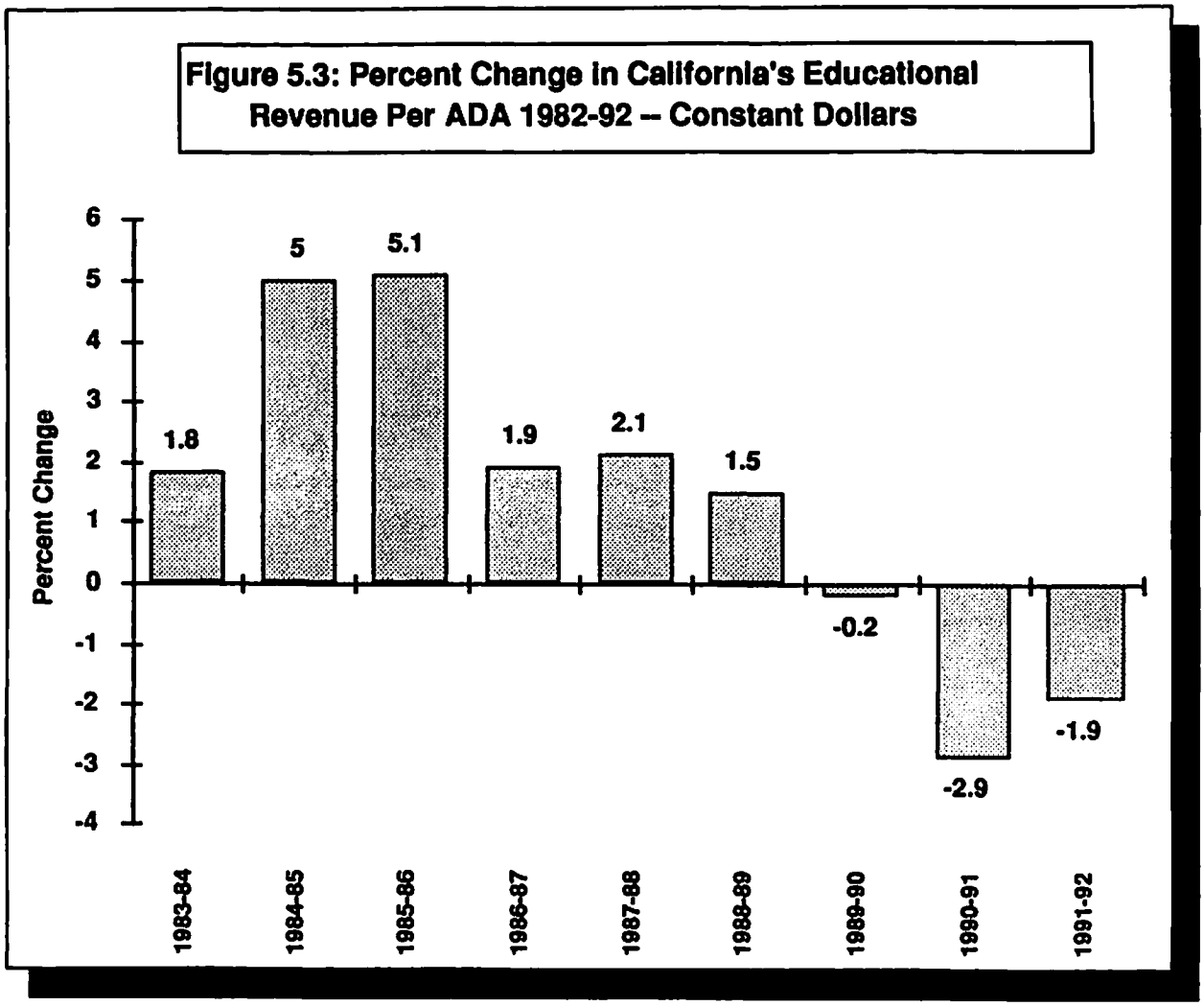


Figure 5.2 and 5.3

- California continues to spend less per pupil than most industrialized states, and less than the national average.

- In 1990–91, California spent $3,854 less per pupil than New York, $1,708 less than Pennsylvania, and $382 less per pupil than the national average.

- Despite Proposition 98, between 1988–89 and 1990–91, real per-pupil spending in California fell 5.2 percent.

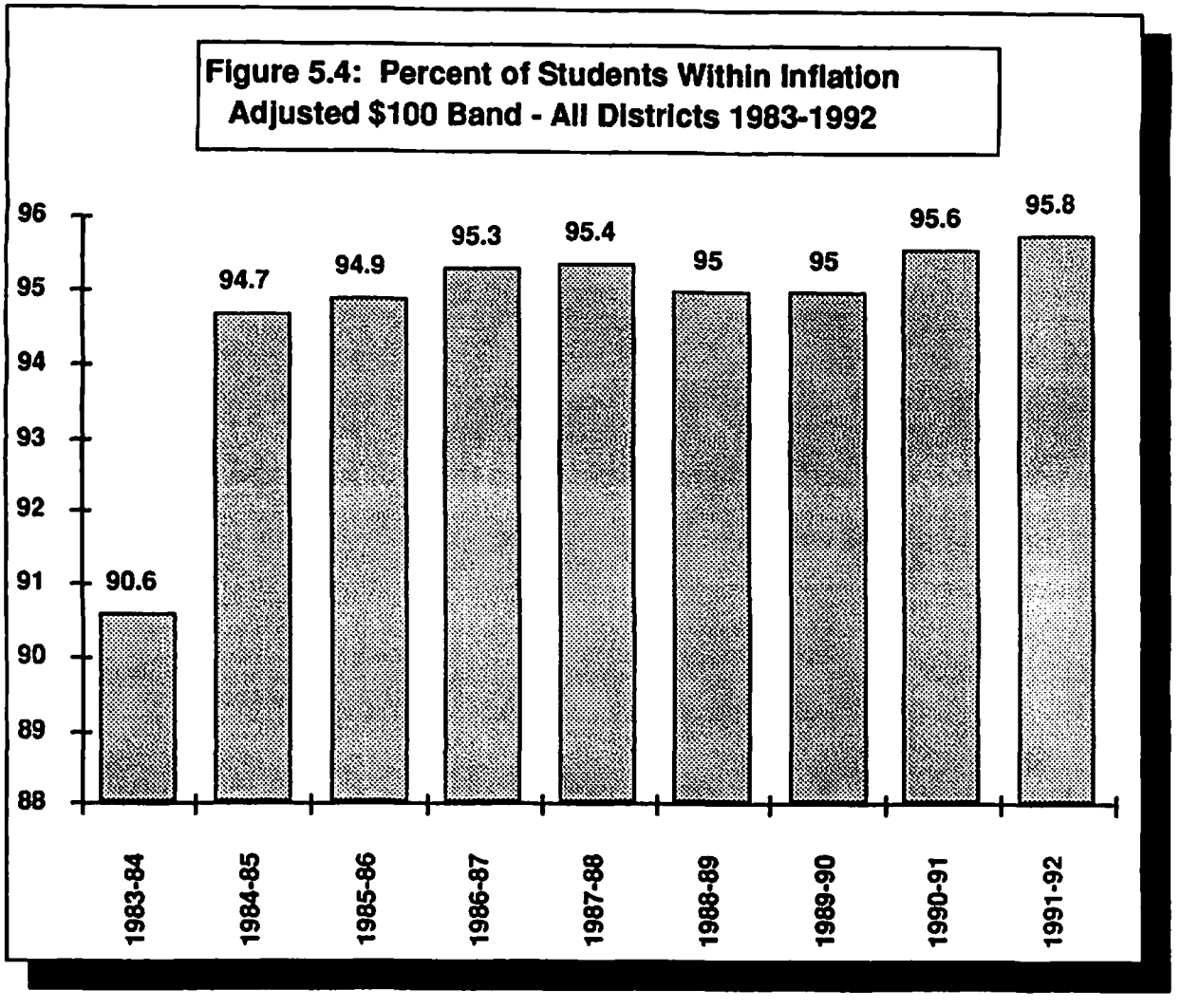


Figure 5.4

- In 1991–92, nearly 96 percent of California districts (95.8%) were within the inflation-adjusted $100 base revenue limit band imposed by the *Serrano* decision.

- Over the nine-year span, per-pupil spending equality has steadily improved.

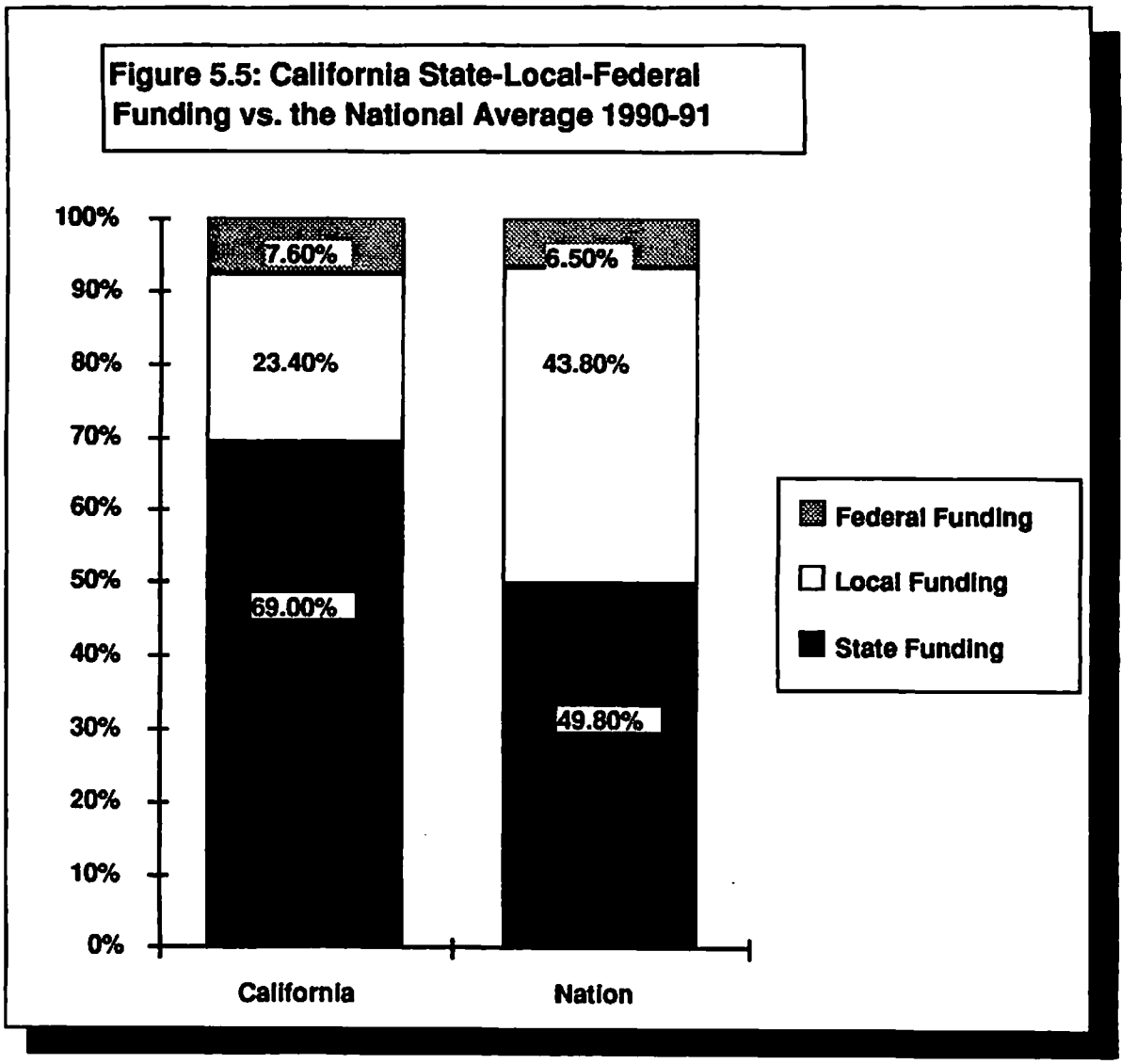
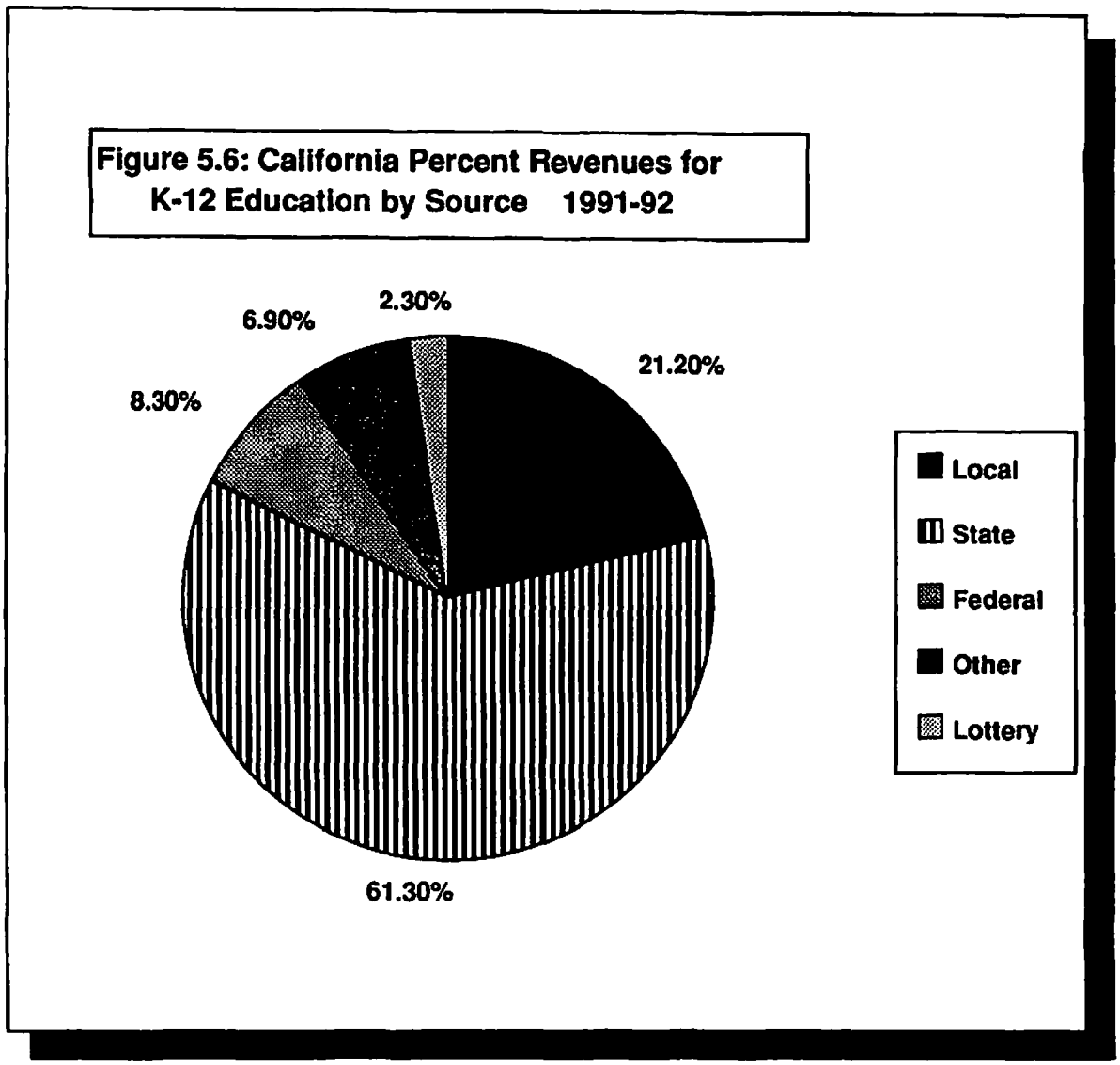


Figure 5.5: California State-Local-Federal Funding vs. the National Average 1990-91
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
7.60%
23.40%
69.00%
6.50%
43.80%
49.80%
California
Nation
Federal Funding
Local Funding
State Funding



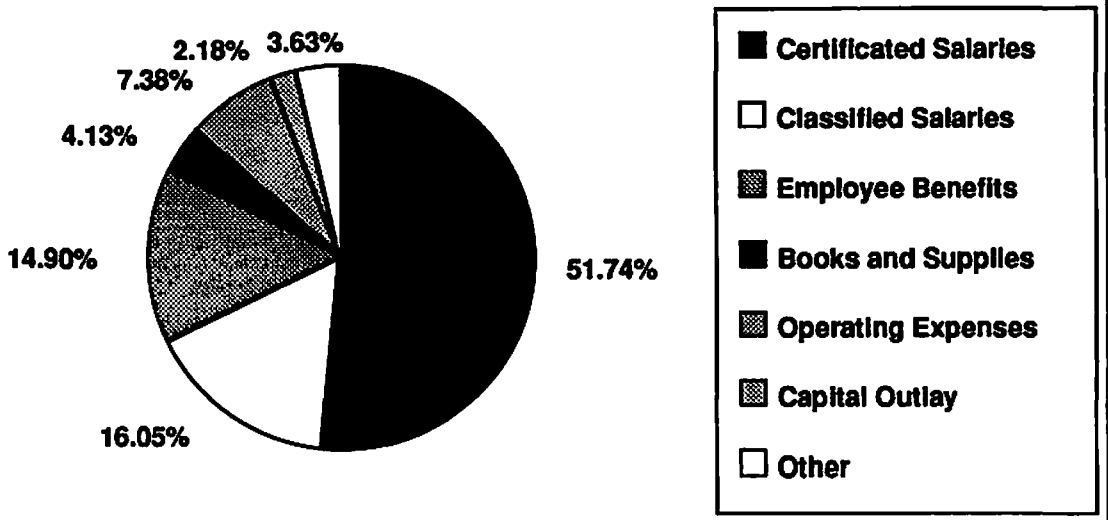
Figures 5.5 and 5.6

- State government in California provides more than two-thirds (69%) of education revenues, while local sources contribute slightly less than one-quarter (23.4%) of the total.

- In the nation generally, state and local sources split education funding, with state sources contributing 49.8 percent of education dollars and local sources providing 43.8 percent.

- Lottery revenues in 1990-91 provided only about two cents (2.2%) of every education dollar, down from 3.3 percent in 1989–90.

Figure 5.7: California School District General Fund Expenditures by Category 1988-89



Figures 5.7 and 5.8

- Employee salaries and benefits account for more than 82 percent of a school district's general fund expenditures.
- Books and supplies comprise under 5 percent of district expenditures.
- 93 percent of California education dollars are spent at schools.
- More than two-thirds of education dollars (64%) are spent on direct classroom instruction.

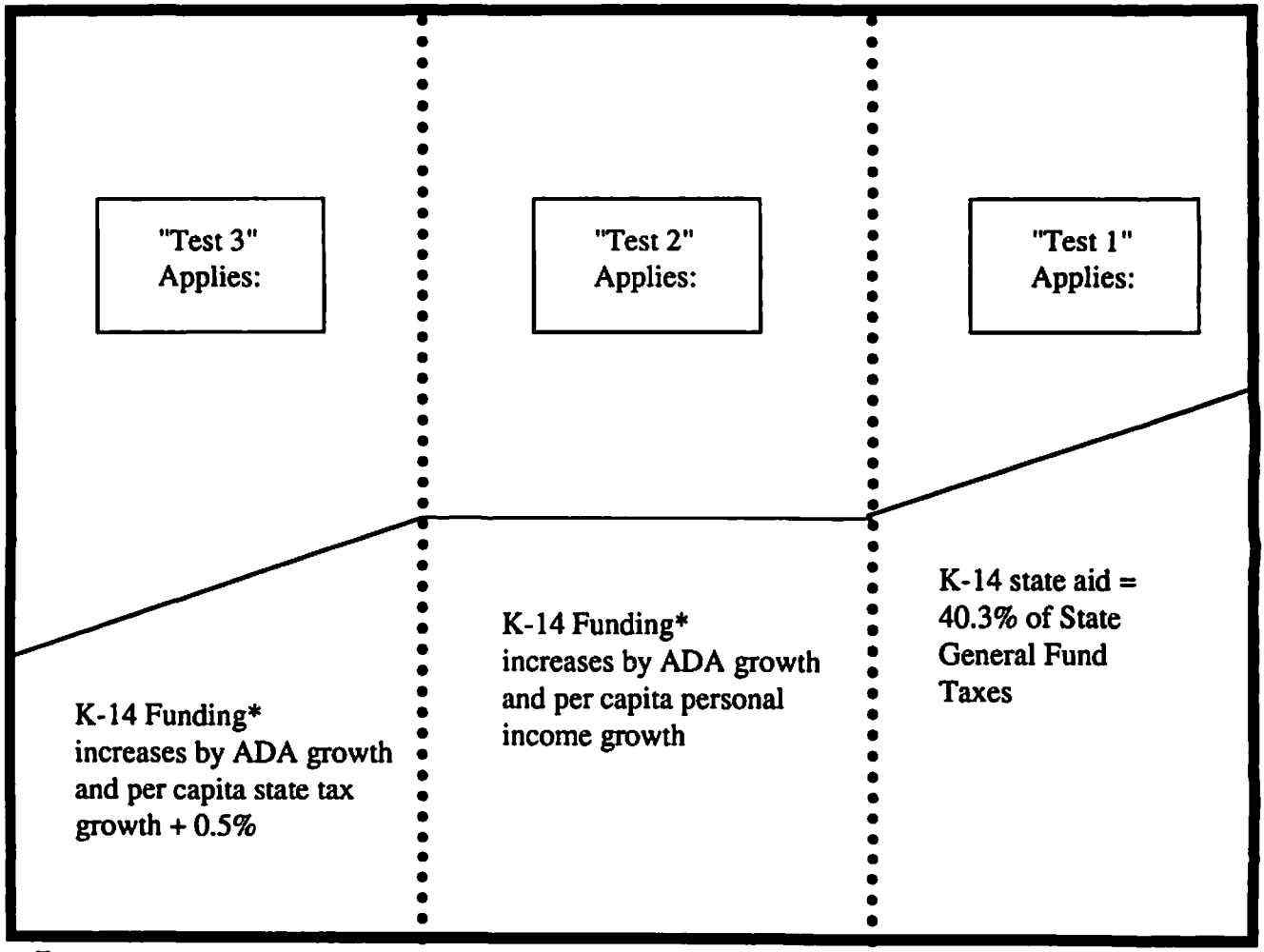
Figure 5.8: The Average Costs of a California School: 1988–89

Cost Category	Dollars In Thousands	Percent Of Total
Classroom Costs	**$1,721**	**64%**
Teachers	1,377	51%
25 regular teachers		
3 special education teachers		
Instructional Aides	119	5%
4 regular aides		
3 special education		
Pupil Support	81	3%
1.7 counselors, psychologists, nurses		
Books, Supplies, Equipment	144	5%
$2,300 per classroom for books and supplies		
$3,300 per classroom for instructional equipment and other costs		
School Site Costs	**$798**	**29.4%**
Buildings	299	11%
7 custodians, painters, gardeners; utilities, maintenance, supplies		
Food	99	4%
2 cafeteria workers; food, supplies		
Transportation	88	3%
2 bus drivers; buses, fuel, supplies		
Instructional Support	120	4.4%
0.7 curriculum specialist, curriculum supervisor, librarian		
1.2 library aide, media technician		
School Site Leadership and Support	192	7%
1.3 school principals, vice principals		
2.7 secretaries, clerical support		
District/County Costs	**166**	**6.2 %**
District Administration	150	5.6%
0.7 district administrator		
1.4 secretary, clerical; supplies equipment, other costs, such as insurance, legal and auditing service		
County Oversight	16	0.6%
0.3 county office level staff; equipment, office supplies		
California Department Of Education	**11**	**0.4%**
0.16 state level administrators and in structional support staff per school; office supplies equipment, personal service contracts and travel		
Total Costs	**$2,696**	**100%**

Figure 5.9

MINIMUM FUNDING LEVEL DEPENDS UPON STATE TAX REVENUES

PROPOSITION 98 STATE AID



LOW HIGH

STATE TAX REVENUES

Sources for Chapter 5

Figure 5.1

California Legislative Analyst, July 1991

Figure 5.2

National Education Association, *Estimate of School Statistics*, 1990–91

Figure 5.3

California Legislative Analyst, July 1991

Figure 5.4

California State Department of Education

Figure 5.5

National Education Association, *Estimate of School Statistics*, 1990–91

Figure 5.6

California Legislative Analyst, July 1991

Figure 5.7

California State Department of Education

Figure 5.8

California State Department of Education, Office of School Finance Reports

Figure 5.9

School Services of California, Inc.

NOTES

Chapter 6

System Characteristics

California's education system is characterized by size and complexity. Nearly half a million individuals—almost one out of every 20 members of the California workforce—is employed in K–12 education.

California pays its teachers relatively well, but maintains among the most crowded classes in the nation. State education governance depends upon the collaboration and cooperation of 27 executive and legislative branch agencies and departments.

Figure 6.1: California School District Employees, 1990–1991

Certificated:	
Administrators	18,543
Classroom Teachers	219,353
"Other" Certificated	15,903
Total Certificated	**253,799**
Classified:	
Full Time	121,238
Part Time	112,135
Total Classified	**233,873**
Total Education Employees	**487,672**

Figure 6.1

- California schools employed 487,672 individuals in 1990–91.
- Classroom teachers comprise 86 percent of certificated employees.
- School districts employ nearly as many classified as certificated employees.

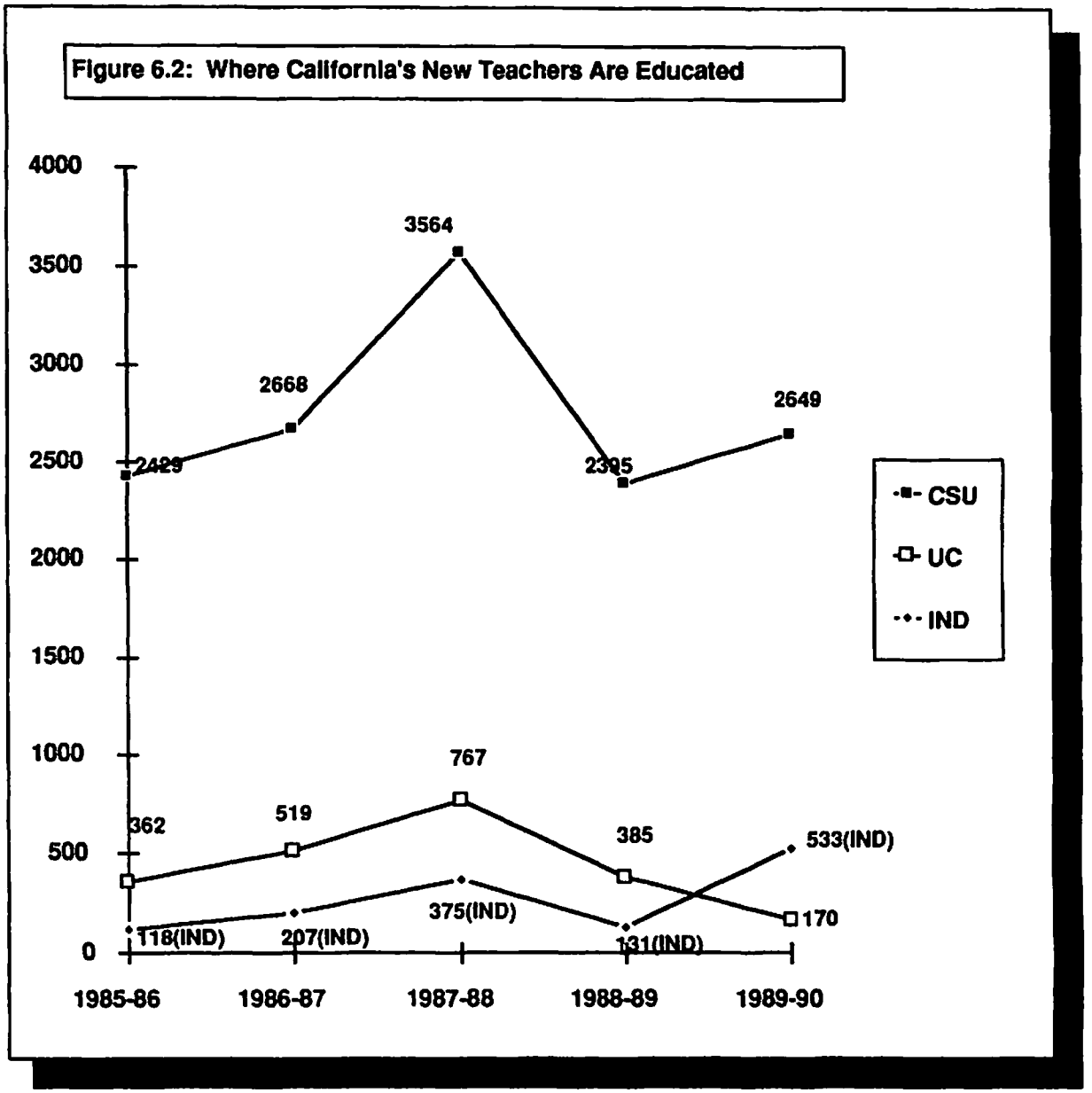


Figure 6.2

- The number of individuals recommended to the Commission on Teacher Credentialing for clear multiple and single subject credentials increased 23 percent in 1990–91 compared to 1988–89.

- More than three-quarters (79%) of California's new teachers earned their credentials at a campus of the California State University. The number of new teachers trained at University of California campuses declined 75 percent in 1989–90 as compared to 1987–88.

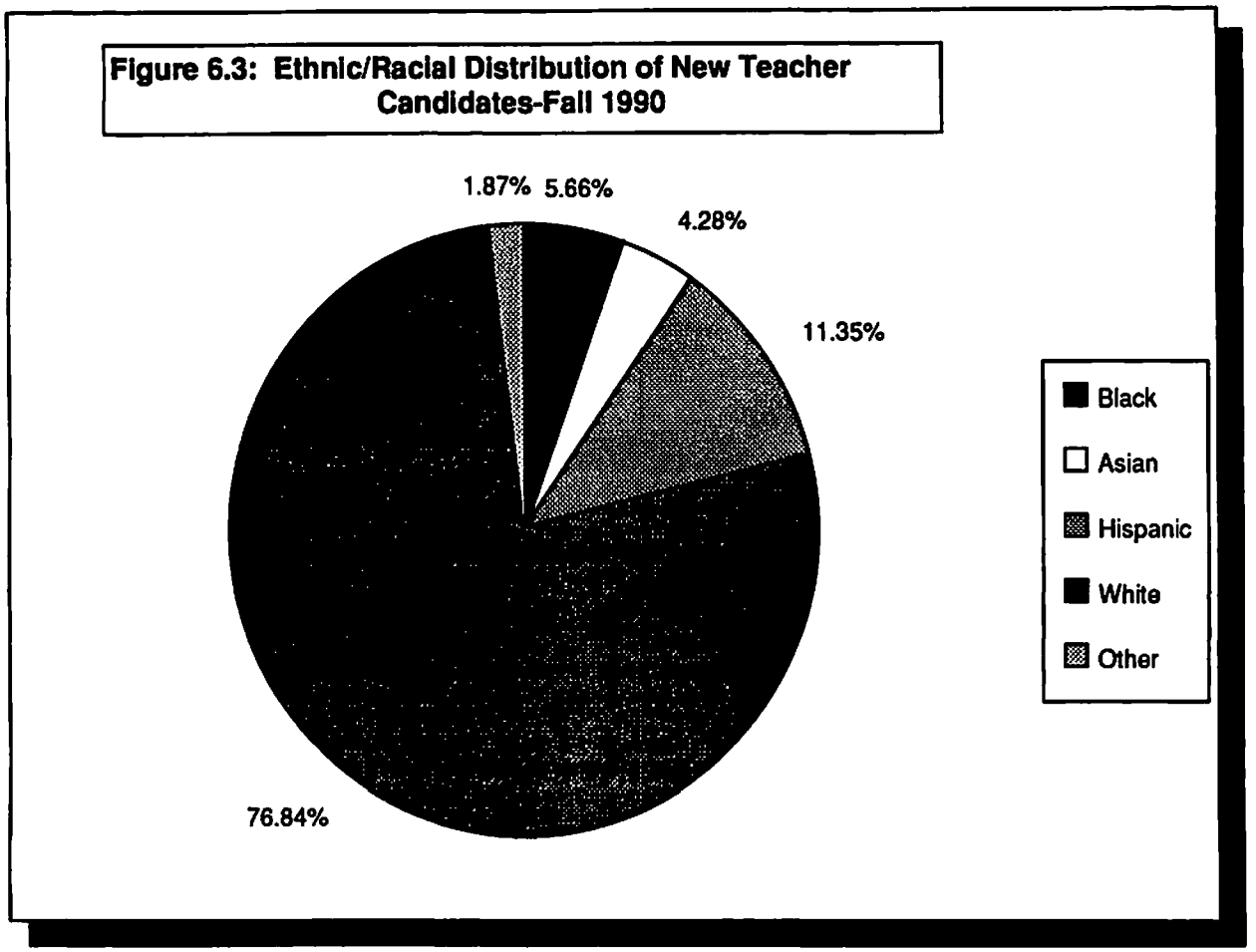


Figure 6.3

- Despite California's increasing ethnic student population, less than one-fourth of the state's newly credentialed teachers (23.1%) are members of ethnic and racial minority groups.

- Hispanic credential candidates comprise the largest single category (11.4%) of new minority teachers.

Figure 6.4: CBEST Passing Rates Grouped by Credential Sought

Credential to be Applied For	*1990–91* *Percent Passing*
Multiple Subjects	68%
Multiple Subjects with Bilingual Emphasis	44%
Single Subjects	75%
Single Subjects with Bilingual Emphasis	52%

Figure 6.5: CBEST Passing Rates By Ethnic Group

Ethnic Group	*1990-91* *Percent Passing*
Asian-Oriental	61%
Black	39%
Mexican American	53%
Other Hispanics	46%
White	81%
Other Groups	65%

Figures 6.4 and 6.5

- In 1990–91, the ninth year of the California Basic Educational Skills Test (CBEST), the passing rate for individuals applying for credentials with bilingual emphasis was significantly lower than for individuals applying for nonbilingual credentials.

- CBEST passing rates remained highest for whites (81%), and lowest (39%) for black credential candidates.

Figure 6.6: California's Largest Public School Districts, 1990–1991

Rank	County	District	Enrollment
1	Los Angeles	Los Angeles Unified	625,086
2	San Diego	San Diego City Unified	121,152
3	Fresno	Fresno Unified	71,500
4	Los Angeles	Long Beach Unified	71,342
5	San Francisco	San Francisco Unified	61,688
6	Alameda	Oakland Unified	52,095
7	Sacramento	Sacramento City Unified	49,557
8	Sacramento	San Juan Unified	47,690
9	Orange	Santa Ana Unified	45,964
10	San Bernadino	San Bernadino City Unified	40,589
11	Orange	Garden Grove Unified	37,969
12	Los Angeles	Montebello Unified	32,938
13	Contra Costa	Mount Diablo Unified	32,840
14	San Joaquin	Stockton City Unified	32,687
15	Riverside	Riverside Unified	31,326
16	Contra Costa	Richmond Unified	31,292
17	Santa Clara	San Jose Unified	29,630
18	Riverside	Moreno Valley Unified	29,064
19	San Diego	Sweetwater Union High	27,894
20	Los Angeles	Compton Unified	27,585
21	Sacramento	Elk Grove Unified	27,246
22	Alameda	Fremont Unified	27,172
23	San Bernadino	Fontana Unified	27,043
24	Los Angeles	Pomona Unified	26,918
25	Orange	Capistrano Unified	26,852

Figure 6.7: Types of Districts, 1990–91

	Number
Elementary Districts (K through 8)	608
High School Districts (9 through 12)	109
Unified School Districts (K through 12)	292
	1,009

Figure 6.8: Size of Districts, 1990–91

	Percent of Districts	Number of Students (ADA)
Under 500 Students	33%	69,690
500 to 1,000	12%	87,986
1,000 to 15,000	47%	2,171,746
15,000 to 50,000	7%	1,550,123
Over 50,000 Students	<1%	915,539

Figures 6.7 and 6.8

- Nearly two-thirds of California school districts (60%) encompass only grades K–8. Less than one-third of the districts (29%) are unified (K–12).

- The vast majority of California districts (92%) have 15,000 or fewer students.

Figure 6.9: Map of California State Education Governance System

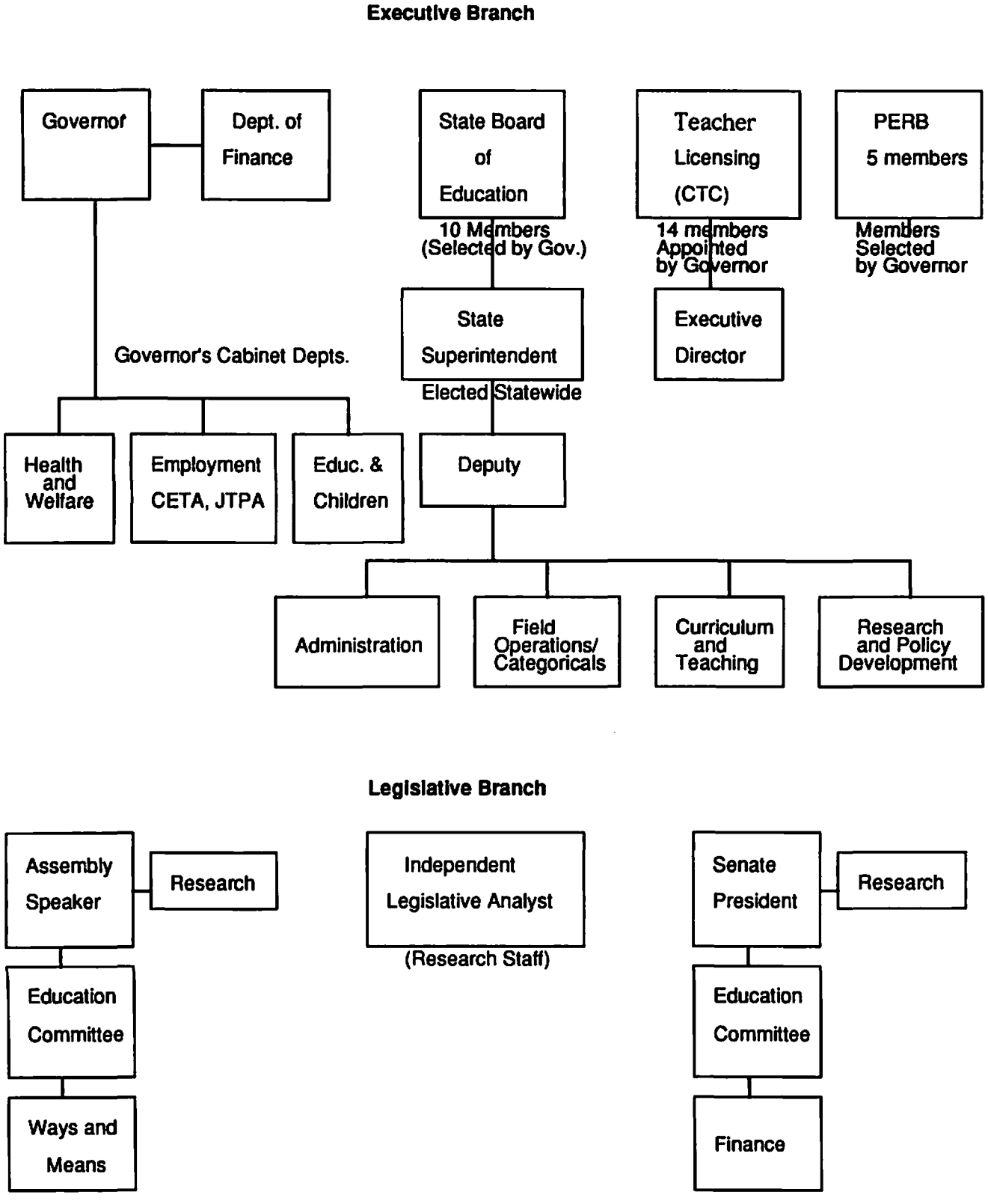


Figure 6.10: State Curriculum Frameworks

- English-Language Arts (1987) [Due to be reviewed and possibly revised in 1993]
- Foreign Language (1989)
- Health Instruction (1988) [revised version to include physical education, due 1993]
- History-Social Science (1988)
- Mathematics (1985) [new version due Spring 1992]
- Science (1990)
- Visual and Performing Arts (1989)

Figure 6.11: State of California Minimum Requirments for High School Graduation

- 3 years of English
- 2 years of mathematics
- 2 years of science (includes both biological and physical)
- 3 years of social studies (includes U.S. history and geography and World history, culture, and geography)
- 1 semester of American government and civics
- 1 semester of economics
- 1 year in either foreign language or visual and performing arts
- 2 years of physical education
- Other course work as specified by local governing board

Figure 6.10

- California has developed comprehensive curriculum frameworks in seven basic subject areas.

- Frameworks are not mandated for local district use, but have assumed increasing importance and influence in the wake of education reform efforts.

- Themes common to all frameworks include a problem-solving orientation, emphasis on complex thinking skills and depth over breadth, and a multidisciplinary, multicultural approach to instruction.

Figure 6.12: Course Requirements for Admission to the University of California, 1991–92

- 4 years of English
- 3 years of mathematics (4 years recommended)
- 1 year of U.S. history (1/2 year may be civics or American government)
- 1 year of laboratory science (3 years recommended)
- 2 years of one foreign language (3 years recommended)
- 4 years of college preparatory elective courses chosen from at least two of the following areas: history, English, advanced mathematics, laboratory science, foreign language, social science, and visual and performing arts.

Figure 6.13: Course Requirements for Admission to the California State University System, 1991–92

- 4 years of English
- 3 years of mathematics
- 1 year of U.S. history and government
- 1 year of laboratory science
- 2 years of foreign language
- 1 year of visual and performing arts
- 3 years of elective courses, selected from English, advanced mathematics, social studies, history, laboratory science, agriculture, foreign language, and the visual and performing arts.

Figures 6.11, 6.12, and 6.13

- Minimum high school graduation requirements were increased by the state as a part of Senate Bill 813 in 1983. The new requirements took effect in the 1988–89 school year.

- The California State University system increased course admission requirements effective in 1988. CSU requirements now parallel the University of California's "A–F" admission requirements.

AVERAGE CLASS SIZE AND PUPIL-TEACHER RATIO IN CALIFORNIA PUBLIC SCHOOLS, 1985-86 THROUGH 1990-91

Figure 6.14: Pupil-Teacher Ratio*

	85-86	86-87	87-88	88-89	89-90	90-91
Elementary Schools	24.3	24.3	24.2	24.4	24.2	24.2
Secondary Schools	23.9	23.5	23.4	23.5	23.1	23.4

* *Computed by dividing the enrollment by the full-time equivalent teachers*

Figure 6.15: Average Class Size* in Selected Secondary Courses

	85-86	86-87	87-88	88-89	89-90◆	90-91◆
English	27.3	26.9	26.6	26.9	26.9	27.2
Mathematics	29.0	28.8	28.4	28.6	28.9	29.1
Science	28.9	28.9	28.1	28.1	28.2	28.4
Social Science	29.9	29.4	29.1	29.1	29.1	29.3

* *Computed by dividing the number of students in classes by the number of classes.*
◆ *Includes courses with enrollment from 1 to 50 students*

Figures 6.14 and 6.15

- California's class sizes are the second highest in the nation.
- Pupil:teacher ratios in the state have remained stable at both the elementary and secondary levels for the last five years.
- The average class in English, mathematics, science, and social studies contains more than 25 students.

Figure 6.16: Elementary Class Time on Mathematics and Science

	MATHEMATICS		SCIENCE	
	Grade 1 - 3 Hours/Week	Grade 4 - 6 Hours/Week	Grade 1 - 3 Hours/Week	Grade 4 - 6 Hours/Week
California	4.9	4.7	2.5	2.7
Illinois	4.6	4.8	2.2	3.3
New York	5.0	4.8	2.2	3.0
North Dakota	4.7	4.7	2.3	3.4
Pennsylvania	4.7	4.7	2.1	2.7
Texas	5.1	5.1	3.5	4.0

Figure 6.17: Estimated Proportion of Public School Students Taking Selected Mathematics Courses by Graduation

State	Algebra 1 (Formal Math Level 1)	Algebra 2 (Formal Math Level 3)	Calculus (Formal Math Level 5)
California	92	44	9
Illinois	77	39	9
New York	69	46	12
North Dakota	95	64	3
Pennsylvania	88	57	16
Texas	82	54	5

Figures 6.16 and 6.17

- California elementary school students spend an average of 4.9 hours per week studying mathematics, and 4.7 hours per week studying science.

- A smaller percentage of math teachers in California than in the comparison states (with the exception of North Dakota) majored in mathematics in college.

Figure 6.18: Estimated Proportion of Public School Students Takling Selected Science Courses by Graduation

State	Biology (First Year)	Chemistry (First Year)	Physics (First Year)
California	91	33	16
Illinois	78	40	20
New York	95+	56	28
North Dakota	95+	54	24
Pennsylvania	95+	56	29
Texas	95+	40	12

Figure 6.19: Percentahge of Mathematics and Science Teachers with College Major in Field

	Primary Assignment Math: % w/ Major in Math	*All Teachers of Math % w/ Major in Math*	*Primary Assignment Science: % w/ Major in Science*	*All Teachers of Science % w/ Major in Science*
California	39	33	68	52
Illinois	56	51	61	56
New York	57	49	71	58
North Dakota	29	28	73	61
Pennsylvania	45	41	60	55
Texas	46	42	62	51

Figures 6.18 and 6.19

- In California, as in the comparison states, only a slender proportion of students have taken advanced mathematics by the time they graduate from high school.

- Fewer than one-fifth of California students take a physics course in high school.

Figure 6.20: Rankings for California, 1989–90

	Rank in US	California Average	US Average
Teachers' Salaries	6	$36,418	$31,166
Number of pupils enrolled per teacher	2*	23 pupils	17 pupils
Expenditures per K–12 pupil (ADA)	24	$4,598	$4,890
Public school revenue (1987-88)per $1,000 personal income	44	$38	$43
Per capita personal income	9	$18,753	$16,489
Per capita expenditures:			
State & local government	10	$3,240	$2,857
Public welfare	10	433	352
Health & Hospitals	11	292	252
Police protection	4	149	107
Fire Protection	6	77	48
Highways	51	148	226
Public Schools	30	666	690

* *This ranking means that California has more pupils per teacher than 49 other states and the District of Columbia*

Sources for Chapter 6

Figure 6.1

California State Department of Education, Demographics Unit

Figure 6.2

California Commission on Teacher Credentialing, A Report on Teacher Supply, July 1991

Figure 6.3

California Commission on Teacher Credentialing, A Report on Teacher Supply, July 1991

Figure 6.4

California Commission on Teacher Credentialing, The California Basic Education Skills Test Annual Report of Examination Results, September 1991

Figure 6.5

California Commission on Teacher Credentialing, The California Basic Education Skills Test Annual Report of Examination Results, September 1991

Figure 6.6

California State Department of Education, Education Demographics Unit, Program Evaluation and Research Division

Figure 6.7

California State Department of Education

Figure 6.8

California State Department of Education

Figure 6.9

Michael W. Kirst, Stanford University

Figure 6.10

California State Department of Education

Figure 6.11

California State Department of Education

Figure 6.12

University of California, Office of the President

Figure 6.13

California State University, Office of the Chancellor

Figure 6.14

California State Department of Education, Education Demographics Unit, Program Evaluation and Research Division

Figure 6.15

California State Department of Education, Education Demographics Unit, Program Evaluation and Research Division

Figure 6.16

Council of Chief State School Officers, State Indicators of Science and Mathematics Education, 1990.

Figure 6.17

Council of Chief State School Officers, State Indicators of Science and Mathematics Education, 1990.

Figure 6.18

Council of Chief State School Officers, State Indicators of Science and Mathematics Education, 1990.

Figure 6.19

Council of Chief State School Officers, State Indicators of Science and Mathematics Education, 1990.

Figure 6.20

National Education Association, Ranking of the States, 1990.

NOTES