
TEACHING AND CALIFORNIA'S FUTURE

California's Teaching Force 2006 *Key Issues and Trends*

The Center for the Future of Teaching and Learning
and

California State University, Office of the Chancellor
Policy Analysis for California Education
University of California, Office of the President
WestEd

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ABBREVIATIONS

AB	Assembly Bill
API	Academic Performance Index
APLE	Assumption Program of Loans for Education
AYP	Adequate Yearly Progress
BCLAD	Bilingual, Crosscultural, Language and Academic Development
BTSA	Beginning Teacher Support and Assessment
CAHSEE	California High School Exit Examination
CalSTRS	California State Teachers' Retirement System
CalTeach	California Center for Teaching Careers
CALTIDES	California Longitudinal Teacher Integrated Data Education System
CaMSP	California Mathematics and Science Partnership Program
CBEDS	California Basic Educational Data System
CBEST	California Basic Educational Skills Test
CCC	California Community Colleges
CCST	California Council on Science and Technology
CCTC	California Commission on Teacher Credentialing
CDE	California Department of Education
CDOF	California Department of Finance
CFASST	California Formative Assessment and Support System for Teachers
CMIT	California Mathematics Initiative for Teaching
CSAC	California Student Aid Commission
CSET	California Subject Examination for Teachers
CSM	Certificated Staff Mentoring
CSMP	California Subject Matter Projects
CST	California Standards Test
CSTP	California Standards for the Teaching Profession
CSU	California State University
CTA	California Teachers Association
EIA	Economic Impact Aid
EL	English Learner
ELD	English Language Development
ESEA	Elementary and Secondary Education Act

GRE	Graduate Record Examination
ITSDR	Instructional Time and Staff Development Reform
LAO	Legislative Analyst's Office
NCLB	No Child Left Behind Act
PACT	Performance Assessment for California Teachers
PAIF	Professional Assignment Information Form
PAR	Peer Assistance and Review
PMAT	Personnel Management Assistance Team
PTTP	Paraprofessional Teacher Training Program
QEIA	Quality Education Investment Act
RICA	Reading Instruction Competence Assessment
SAT	Scholastic Aptitude Test
SB	Senate Bill
SDAIE	Specially Designed Academic Instruction in English
SIF	School Information Form
STAR	Standardized Testing and Reporting
TAP	Teaching as a Priority
TCF	Teaching and California's Future
TPA	Teacher Performance Assessment
TPE	Teacher Performance Expectation
TRIP	Teacher Recruitment Incentive Program
UC	University of California

CONTEXT OF CALIFORNIA EDUCATION

It is clear from actions taken in 2006 that education is a top priority for California's legislature and Governor. State policymakers have used increased state revenues to fund a series of initiatives aimed at strengthening the teacher workforce and improving student achievement, especially in the state's lowest performing schools. The 2006-07 state budget includes \$49.1 billion in Proposition 98 funds (the state's minimum-funding guarantee) for K-12 programs, an increase of \$4.5 billion over the 2005-06 enacted budget. Alongside the increased funding, new legislation seeks to increase the state's focus on equity by targeting additional resources at the lowest achieving schools, and to strengthen the teaching profession by supporting the recruitment of new teachers, streamlining the credentialing process, strengthening teacher preparation, and providing greater support for both new and experienced teachers. Of particular note are the omnibus teacher workforce bill authored by Senator Jack Scott (Senate Bill [SB] 1209, Chapter 517, Statutes of 2006) and the Quality Education Investment Act authored by Senator Tom Torlakson (SB 1133, Chapter 751, Statutes of 2006), which implements the settlement agreement between the California Teachers Association (CTA) and the Governor.

The increased funding and legislation are warranted. California educators and policymakers face formidable challenges in their quest to ensure that all students meet the state's high achievement standards, as well as the No Child Left Behind target of 100% of students proficient in mathematics and English-language arts by 2013-14. Currently, fewer than half of California students reach or exceed the proficiency level on state assessments. More troubling, the achievement gap persists between Latino and African-American students on the one hand, and white and Asian students on the other. While well-prepared and effective teachers are key to improving student achievement, the state also continues to confront challenges in its efforts to ensure that every classroom

has a qualified teacher. Although California has made significant gains in reducing the number of underprepared teachers, thousands of classrooms continue to be staffed by teachers who fail to meet minimum state and federal teacher quality requirements.

It is within this context of persistent challenges and responsive policymaking that the Center for the Future of Teaching and Learning presents its seventh annual report on the status of the teaching profession in California.¹ These reports, part of the Center's *Teaching and California's Future* (TCF) initiative, are meant to provide California policymakers with objective and timely data on the state's teacher workforce. In fact, many core components of this year's legislation stem from the findings and recommendations of previous reports. TCF has five central goals:

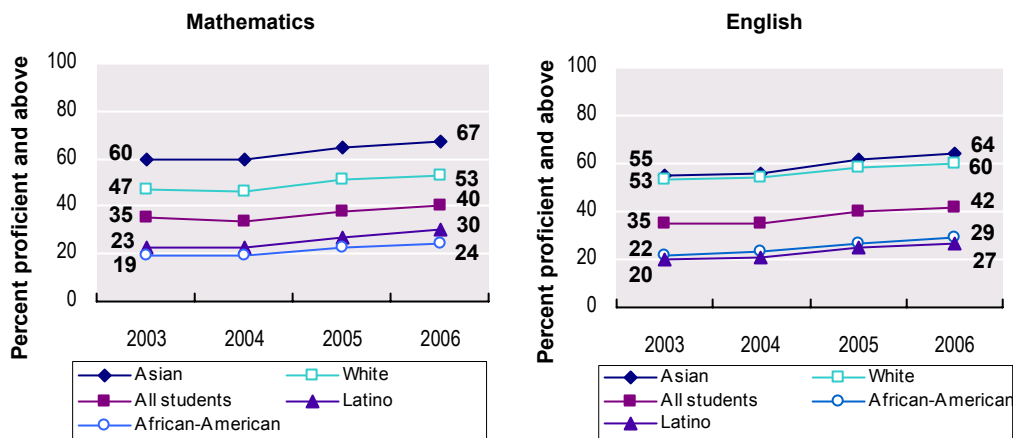
- (1) Every student will have a fully prepared and effective teacher.
- (2) Every district will be able to attract and retain fully qualified, effective teachers.
- (3) Every teacher will work in a safe, clean facility conducive to learning; have adequate materials with which to teach; and have the guidance and support of a capable leader.
- (4) Every pathway into teaching will provide high-quality preparation and be based on California's standards for what students should know and be able to do.
- (5) Every teacher will receive high-quality support as he or she begins teaching, as well as continuing professional development, to ensure that he or she stays current in his or her field.

Research for the reports is conducted by a team at SRI International, an independent research and consulting organization. This year's report is based on secondary

“California educators and policymakers face formidable challenges in their quest to ensure that all students meet the state's high achievement standards.”

¹ Copies of previous years' reports can be found at The Center for the Future of Teaching and Learning's Web site: www.cftl.org.

**Exhibit 1
CST Results by Ethnicity, 2003-2006**



(Source: CDE, 2006a)

analyses of state teacher databases, reviews of legislative and budget documents, and interviews with administrators of the state’s major teacher development programs. In the remainder of this first chapter, we review student achievement trends in the state and then provide an overview of federal and state policies, including highlights from this year’s budget and legislation.

ACCOUNTABILITY AND ACHIEVEMENT IN CALIFORNIA

During the 1990s, California policymakers adopted a set of ambitious standards for what the state’s public schoolchildren should know and be able to do across the content areas. These standards are backed up by a comprehensive system, based on both state and federal requirements, that seeks to hold schools, teachers, and students accountable for results. The system includes the state’s Academic Performance Index (API) established by the Public Schools Accountability Act of 1999; the federal Adequate Yearly Progress (AYP) requirements established by the No Child Left Behind Act of 2001 (NCLB); and, for students, the California High School Exit Examination (CAHSEE), which went into effect for the Class of 2006.²

Since the new standards and accountability systems have been in place, student achievement has improved modestly. Between 2003 and 2006, the percentage of students across the state scoring proficient or above on the California Standards Tests (CSTs) increased from

35% to 42% in English-language arts and from 35% to 40% in mathematics (California Department of Education [CDE], 2006a). Despite this overall improvement, the achievement gap between African-American and Latino students and their white and Asian peers persists and in fact has grown a bit wider (see Exhibit 1). In 2006, only 27% of Latino students were proficient or above on the English-language arts CST, and only 30% were proficient or above on the mathematics CST. Likewise, just 29% of African-American students were proficient or above in English-language arts, and only 24% were proficient or above in mathematics. In contrast, 60% of white students and 64% of Asian students were proficient or above in English-language arts. In mathematics, the numbers were 53% and 67% for white and Asian students, respectively (CDE, 2006a).

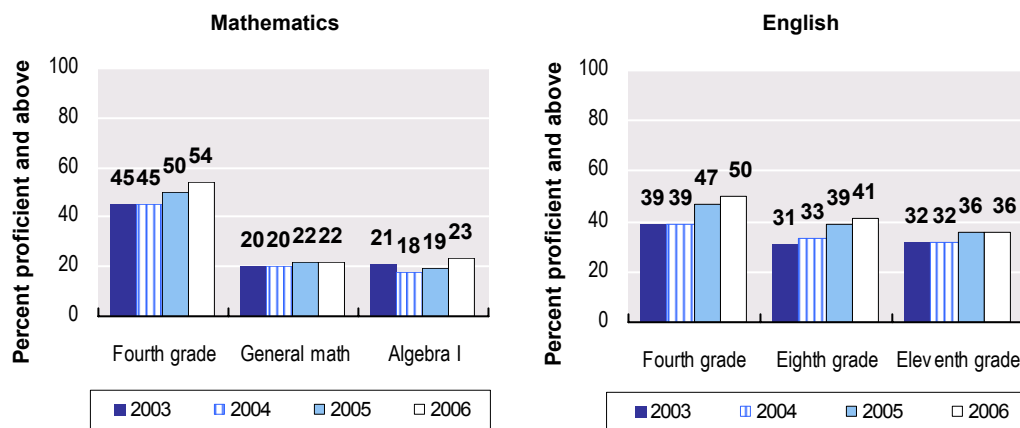
Similar patterns of limited progress combined with a persistent achievement gap can be seen across most grades and subject areas—although elementary students perform appreciably better than their counterparts in middle school and high school (see Exhibit 2). For example, in 2006, 54% of fourth graders were proficient or above in mathematics, but only 23% of secondary students were proficient or above on the Algebra I CST.³ Moreover, the

³ Students take grade-level CSTs in mathematics from grades 2 through 7 that are aligned to the state’s mathematics content standards. Because the mathematics standards for grades 8 through 12 are organized by discipline, such as algebra and geometry, and not by grade level, students take a discipline-specific mathematics CST. The general mathematics test is administered to students in grades 8 and 9 who are not enrolled in a discipline-specific mathematics course.

² See <http://www.cde.ca.gov/ta/ac/ay/documents/overview06.pdf> for an overview of California’s accountability progress reporting system.

“... the achievement gap between African-American and Latino students and their white and Asian peers persists and in fact has grown a bit wider.”

**Exhibit 2
CST Results by Grade and Subject, 2003-2006**



(Source: CDE, 2006a)

percentages of students who reached the proficient level in Algebra I varied widely across racial groups: African-American students (11%), Latino students (14%), white students (33%), and Asian students (53%) (CDE, 2006b). Nonetheless, more eighth graders are taking Algebra I than ever before. In 1999, the first year the Algebra I CST was administered, just 70,000, or 16% of eighth-grade students, took that test. By 2006, that number had increased by more than three-fold to exceed 230,000, or 47% of eighth graders (CDE, 2006b).

The fifth- and eighth-grade science tests provide another example of these achievement patterns. On the fifth-grade science CST, just 32% of students were proficient or above. Statewide, students performed better on the eighth-grade science CST—38% were proficient or above. However, the gaps among racial groups were much larger for the eighth-grade test, ranging from 21% proficient or above among African-American students to 65% proficient or above among Asian students. White students and Latino students were at 55% and 23%, respectively (CDE, 2006b). Student performance in mathematics and science is particularly troubling in light of recent publicity regarding the country’s need for improved education in the two fields to compete in today’s global economy (see Exhibit 3).

An examination of California’s subgroup populations also shows modest improvements but great disparities in achievement. The percentages of economically disadvantaged students, of students receiving special education services, and of English learners (ELs)

scoring proficient or above on the CST were considerably lower than for the state as a whole (CDE, 2006a). Only about one-quarter of economically disadvantaged students were proficient or above on the English-language arts CST, and even fewer ELs and students receiving special education services were proficient or above—14% and 13%, respectively, compared with 42% of all students. The results in mathematics were similar, with only 30% of economically disadvantaged students, 25% of ELs, and 16% of students receiving special education services scoring proficient or above, compared with 40% of all students (see Exhibit 4).

How do these results accord with the targets in the various accountability systems? In the state’s accountability system, schools are given a composite score, the API, ranging from 200 to 1000, based on their students’ scores across grade levels and subject areas.⁴ Each year, schools are given a growth target meant to put them on a trajectory to meet the statewide target of 800. Currently, the state’s average API score is 720. Statewide, in 2005-06, just 52% of schools met their API growth targets—58% of elementary schools, 43% of middle schools, and 36% of high schools (CDE, 2006c).

“Similar patterns of limited progress combined with a persistent achievement gap can be seen across most grades and subject areas.”

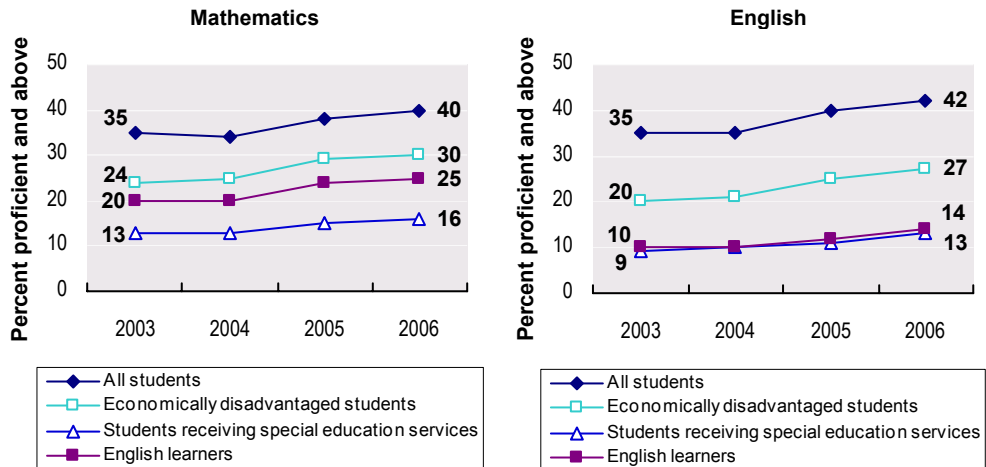
⁴ The weight given to the various scores differs between grades 2-8 and grades 9-12.

Exhibit 3 Improving Mathematics and Science Education in California

In its highly publicized report, *Rising Above the Gathering Storm*, the Committee on Prospering in the Global Economy of the 21st Century, established by the National Academies, targeted one of its four central recommendations on the improvement of K-12 mathematics and science education (National Academies Committee on Science, Engineering, and Public Policy, 2006). Specifically, the Committee recommended awarding 4-year scholarships as a means to annually recruit 10,000 science and mathematics teachers, and increasing the number of students who take Advanced Placement and International Baccalaureate science and mathematics examinations to increase the pipeline of students who are prepared to enter college and graduate with degrees in those fields. It also recommended strengthening the skills of 250,000 current teachers through summer institutes, master's degree programs, and training to teach Advanced Placement and International Baccalaureate courses. The recommendations were implemented in the Protecting America's Competitive Edge Act, a package of three bills introduced in Congress, and are reflected in President Bush's 2006 American Competitiveness Initiative.

In response to the National Academies report, Governor Arnold Schwarzenegger requested the California Council on Science and Technology (CCST), a nonpartisan, not-for-profit organization, to assist the state in its efforts to ensure continued economic prosperity. CCST has established four industry-led task forces to identify concrete actions that can be taken by the business, government, research, and higher education communities to increase California's talent pool and research base and improve its business climate. The work of the task forces is scheduled to be completed in late 2006.⁵

Exhibit 4 CST Results for Subgroup Populations, 2003-2006



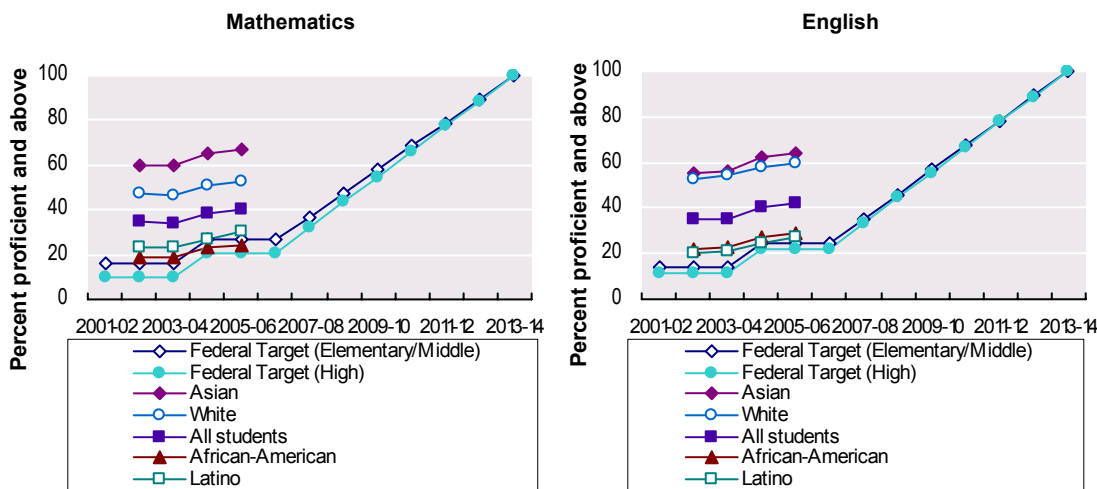
(Source: CDE, 2006a)

The federal accountability system under NCLB varies significantly from the state system in that it requires schools to reach absolute achievement targets each year—or AYP—as opposed to the growth targets in the state system. States must set annual AYP targets for school and district performance that lead to 100% proficiency in mathematics and reading by the 2013-14 school year. For example, from 2004-05 to 2006-07, California's AYP goal for elementary and middle schools is 26.5% proficiency in mathematics and 24.4% in reading. From 2007-08 through 2013-14,

the goals in mathematics and reading increase by about 11% annually until they reach 100%. The goals for high schools are similar. Importantly, schools must meet these targets for their overall student population, as well as for ethnic minorities, economically disadvantaged students, and students receiving special education services. Recent data indicate that 65% of all schools statewide met AYP requirements (CDE, 2006c). But 2,200 schools—a quarter of all schools in the state—that receive federal Title I funds have missed their AYP targets for 2 or more consecutive years and face various sanctions. Further, the state's current achievement trajectories in

⁵ See <http://www.ccst.us/index.php> for more information on CCST.

**Exhibit 5
NCLB Annual Proficiency Targets vs. Student Proficiency on CST**



(Source: CDE, 2006a; U.S. Department of Education, n.d.)

mathematics and English, particularly for Latino and African-American students, suggest that California is not going to reach the 100% proficiency goal by 2013-14 (see Exhibit 5).

While public schools face greater accountability than ever before for producing gains in student achievement, students themselves are also being held to higher expectations. Nowhere is this more apparent than in the debate this year over the CAHSEE. California, like 24 other states across the nation, requires students to pass a basic competency test in mathematics and English-language arts content to receive a diploma (Kober, Zabala, Chudowsky, Chudowsky, Gayler, et al., 2006). Despite court battles over the legality of the CAHSEE, it went into effect for the Class of 2006, the first group of high school students required to pass the test to graduate. An estimated 40,000 seniors, or approximately 9% of the Class of 2006, did not pass the CAHSEE; 25,000 or 62% of these students were Latino. Passage rates were much lower for Latino (85%) and African-American (83%) students, economically disadvantaged students (86%), and ELs (77%) than for white (97%) and Asian (95%) students (CDE, 2006d).⁶

In sum, although achievement on the CST has improved, a majority of California's students have not reached proficiency, and the achievement gap has

widened (see Exhibit 6). Less than a quarter of students were proficient in Algebra I, a requirement for high school graduation, and fewer than half of the students tested were proficient in science. Almost one-half of schools did not reach their API growth targets under the state accountability system, almost one-third did not meet AYP under the federal accountability system, and California is not positioned to meet the 100% proficiency goal by 2014. Further, nearly 10% of students in the Class of 2006 were denied diplomas because they could not pass the CAHSEE; most of these were minority students.

FEDERAL AND STATE POLICIES TO IMPROVE TEACHER QUALITY

Given the high hurdles the state must surmount to improve student achievement and the short timeframe for reaching federal goals, the need for well-prepared and effective teachers is urgent, particularly so in schools where students are not meeting achievement goals. Both federal and state policies have provisions that acknowledge the importance of high-quality teachers.

No Child Left Behind and "Highly Qualified" Teachers

NCLB shone a national spotlight on teacher quality by requiring that all teachers of core academic subjects be "highly qualified" by the end of the 2005-06 school year. Consistent with a growing body of research (Cochran-Smith & Zeichner, 2005; Wilson, Floden, & Ferrini-Mundy, 2001), the legislation emphasizes teacher quality as a major factor in improving the

⁶ SB 517 exempted certain students with disabilities from the requirement of passing the CAHSEE to be eligible for a diploma. The delayed requirement is in effect for 1 year only and applies to students who were on a diploma track for graduation in 2006.

Exhibit 6
Progress Toward Meeting Accountability Targets

Student-level Accountability Indicators	Percent of Students Reaching 100% Proficiency
English-language arts CST	42
Mathematics CST	30
Algebra I CST	23
Fifth-grade science CST	32
Eighth-grade science CST	38
CAHSEE	91 (passing rate)
School-level Accountability Indicators	Percent of Schools Reaching Target
API growth target	52
AYP	65

(Source: CDE, 2006a, 2006b, 2006c)

achievement of all students. In response to NCLB, California defined teachers as “highly qualified” if they (1) hold a bachelor’s degree; (2) have a teaching credential or are working toward one through an alternative preparation program; and (3) have demonstrated subject-matter competency in each assigned subject.⁷ The NCLB requirements are more stringent for secondary special education teachers: they must hold a special education credential and demonstrate subject-matter competency in each core subject they teach.

States were required to develop a plan identifying annual, measurable objectives to meet the “highly qualified” teacher goal. However, by the end of the 2005-06 school year, no states, including California, had met the deadline for putting a highly qualified teacher in every core-subject classroom. Although California has made progress toward meeting the goal of having all teachers highly qualified, approximately 8,000 teachers in 2005-06 were teaching with emergency permits, waivers, or pre-intern certificates and would not be deemed highly qualified under NCLB.⁸

Recognizing that states would not meet the 2005-06 deadline, the U.S. Department of Education requested that all states submit a revised plan explaining steps to reach the highly qualified goal by the end of the 2006-07 school year. In addition, the revised plans were required to address NCLB’s “teacher equity”

provision, which mandates that states “ensure that poor and minority children are not taught at higher rates than other children by inexperienced, unqualified or out-of-field teachers.”⁹ Unlike the “highly qualified” teacher provisions, which require states to report the distribution of highly qualified teachers by school-poverty levels (i.e., whether poor students are more likely than their more affluent peers to be taught by teachers who are not highly qualified), the equity provision requires states to report on (1) whether *minority* students are disproportionately taught by unqualified teachers, and (2) whether both poor and minority students are disproportionately taught by *inexperienced* teachers.¹⁰

A peer review panel concluded that California’s revised plan, submitted in July 2006, was deficient in a number of areas, including its plan to address the inequitable distribution of qualified and experienced teachers.¹¹ The federal government concurred with the panel’s findings, noting that California had not adequately explained its plan to

reach the goal of having all classes in core academic subjects taught by highly qualified teachers by the end of the 2006-07 school year,

⁷ See Appendix B for a list of NCLB-compliant and noncompliant credentials.

⁸ SRI analysis of California Basic Educational Data System (CBEDS) data.

⁹ See the Elementary and Secondary Education Act (ESEA) §1111(b)(8)(C).

¹⁰ The focus on inexperienced teachers comes from research showing that teachers in their first years of teaching are less effective than their veteran peers. See, for example, Hanushek, Kain, O’Brien, and Rikvin (2005).

¹¹ A recent review of state equity plans by The Education Trust (2006) found that only two states, Nevada and Ohio, have provided meaningful and measurable goals for achieving the “teacher equity” provision.

and [ensure] that poor and minority children will be taught at the same rates as other children by highly qualified and experienced teachers (Johnson, 2006, p. 2).

The state submitted a revised plan in September 2006 that attempts to correct the deficiencies identified by the peer reviewers. In addition, CDE is providing targeted technical assistance throughout the year to more than 1,700 schools to help them meet the highly qualified teacher goal by the end of the 2006-07 school year (CDE, 2006e).

Despite these efforts, it is uncertain whether the state can meet the new deadline, given the thousands of teachers who still lack the appropriate credentials. Under NCLB, districts that do not make progress toward meeting annual, measurable objectives for 2 consecutive years must develop an “improvement plan” for increasing the percentage of highly qualified teachers; after 3 consecutive years, the state must enter into agreements with districts on the use of federal Title II funds and develop professional development strategies for districts to use in meeting the state’s annual, measurable objectives.¹²

The Williams v. California Settlement

Teacher quality was also one of the issues raised by the recent *Williams v. State of California* case, which highlighted the inequitable conditions in many of California’s public schools. The landmark case, which was settled in August 2004, focused primarily on textbooks, school facilities, and teachers. To implement the terms of the settlement, state legislators passed multiple bills requiring that all students have instructional materials to use in class and at home, clean and safe schools, and qualified teachers.¹³

With respect to teacher quality, the settlement agreement reiterated California’s established commitment to meeting the NCLB requirement that all teachers must be “highly qualified” by the end of the 2005-06 school year, and the implementing legislation expanded the state’s existing assignment monitoring process to ensure that all teachers have

teaching assignments for which they hold the appropriate credentials or certificates. More specifically, the settlement legislation:

- Requires county superintendents to monitor teacher assignments more frequently (annually in low-performing schools), report new data on teachers of ELs, and address hiring and retention practices.
- Empowers fiscal crisis and management assistance teams to assist districts that fall short of teacher quality goals.
- Streamlines procedures for credentialing teachers prepared in other states (including waiving the California Basic Educational Skills Test [CBEST] and fifth-year program, if the applicant has completed comparable training in another state).
- Requires that the Principal Training Program (AB 75) include training on monitoring and addressing teacher quality.

The settlement legislation also established statutory definitions for teacher “misassignments” and teacher “vacancies,” and created new accountability mechanisms through the Uniform Complaint Process, School Accountability Report Cards, and the assignment monitoring process to ensure that all students are taught by qualified teachers.¹⁴ Parents, students, and community members can file complaints regarding teacher misassignments and vacancies through the new Uniform Complaint Process, and districts must now report teacher misassignments and vacancies on School Accountability Report Cards. In addition, county superintendents must annually review and correct teacher misassignments in schools ranked in deciles 1-3 on the 2003 base API.

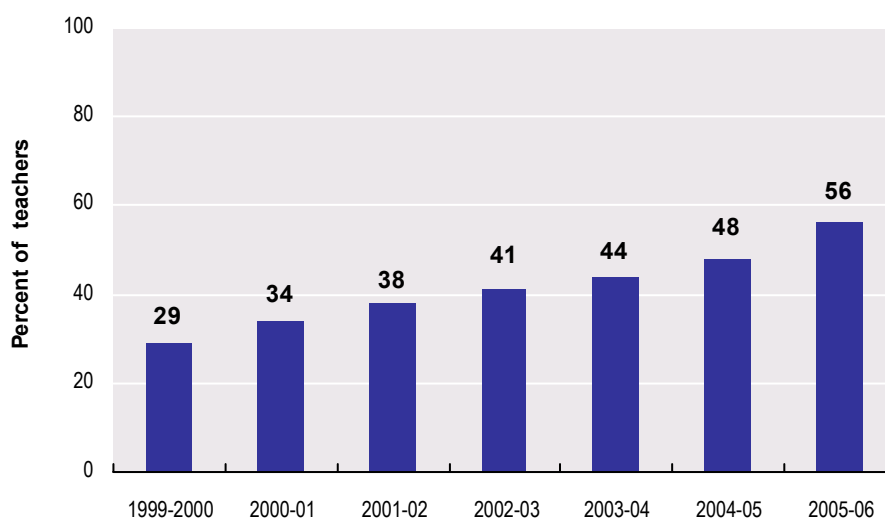
In 2005, two omnibus education clean-up bills, AB 831 (Chapter 118, Statutes of 2005) and SB 512 (Chapter 677, Statutes of 2005), amended the statutes that implemented the settlement. Specifically, the clean-up legislation: (1) clarified that the definition of teacher misassignment includes teachers who lack EL authorization but have at least one EL in the class; (2) allows county superintendents to monitor and review teacher assignments in schools ranked in deciles 1-3 on the 2003 base API on the typical 4-year cycle rather than annually if the county superintendent finds that

¹² For more information, see the NCLB Teacher Requirements Resource Guide on the CDE Web site: <http://www.cde.ca.gov/nclb/sr/tq/documents/nclbresourceguide.pdf>.

¹³ The following bills implemented the settlement legislation: SB 6 (Chapter 899, Statutes of 2004); SB 550 (Chapter 900, Statutes of 2004); Assembly Bill (AB) 1550 (Chapter 901, Statutes of 2004); AB 3001 (Chapter 902, Statutes of 2004); and AB 2727 (Chapter 903, Statutes of 2004). See <http://www.decentschools.org/index.php> for more information on the *Williams* settlement.

¹⁴ A “misassignment” means the placement of a certificated employee in a teaching or services position for which the employee does not hold a legally recognized certificate or credential or the placement of a certificated employee in a teaching or services position that the employee is not otherwise authorized by statute to hold” (California Education Code §35186).

Exhibit 7
Percent of Fully Credentialed Experienced
Teachers with EL Authorization, 1999-2000 to 2005-06



Note: "Experienced" teachers are those with more than 5 years of teaching experience.
 (Source: See Appendix A for source and technical information.)

“Among the most evident results of the Williams settlement to date is the marked increase in the number of teachers with EL authorization.”

the school had no teacher misassignments or vacancies for 2 consecutive years (unless the school is likely to have problems with teacher misassignments and vacancies, given past experience or other information); and (3) requires the California Commission on Teacher Credentialing (CCTC) to provide additional teacher certification data at the state, county, and district levels in its annual teacher supply report. Although county offices must report the results of the assignment monitoring process to CCTC and CDE by July 1 of each year, data collected during the 2004-05 and 2005-06 school years have not been released to the public.

Among the most evident results of the *Williams* settlement to date is the marked increase in the number of teachers with EL authorization. Between 2004-05 and 2005-06, the first 2 years of settlement implementation, the percentage of veteran teachers (those with more than 5 years of experience) with EL authorization rose from 48% to 56% (see Exhibit 7).¹⁵

A 2005 report on the first year of implementation suggests that these numbers may be attributable to county superintendent monitoring and correction efforts. The report found that “county superintendents identified hundreds of schools and tens of thousands of classes in which teachers were teaching English Language Learners without the required training or

authorization” (Allen, 2005, p. 6). The report noted an upsurge in the number of veteran teachers seeking EL training and a greater awareness of the requirement that teachers must hold the appropriate authorization if even one student in a class requires EL services.

NEW STATE PRIORITIES

In addition to the more established policies of NCLB and the *Williams* settlement, California has invested new monies and passed new legislation to improve teacher quality and student achievement. After multiple years of state budget reductions, the 2006-07 budget finally contains additional resources to address some of the state’s pressing educational challenges. With more money available due to a stronger economy and unanticipated growth in state revenues, combined with a consensus in the education community, policymakers have both the necessary fiscal and political capital to redouble efforts to improve teacher quality.

The results are notable: the state is investing substantial new funds in K-12 education and has passed a series of bills targeted at improving teaching and learning throughout the state. The 2006-07 budget package includes \$67.1 billion in total K-12 funding, including \$49.1 billion in Proposition 98 funds, the state’s minimum-funding guarantee for education. In all, the budget contains \$7 billion in new state funding for K-12 education—\$4.5 billion

¹⁵ SRI analysis of CBEDS data.

for new, ongoing expenditures and \$2.5 billion for one-time purposes. The budget fully funds base programs, significantly increases funding for a number of existing programs, and provides funding for new programs (Legislative Analyst's Office [LAO], 2006).

The new budget also restores Proposition 98 funds suspended during the last 2 fiscal years. The CTA and the Governor recently agreed to settle a lawsuit filed by the CTA on the grounds that the Governor did not fully fund the Proposition 98 minimum guarantee. The settlement agreement, known as the Quality Education Investment Act (QEIA, SB 1133, Torlakson), restores funding owed from fiscal years 2004-05 and 2005-06, and provides \$2.9 billion in one-time Proposition 98 funds over 7 years to K-12 schools and community colleges. Instead of allocating funds across the state's schools, the program targets resources to the lowest performing schools for the purpose of: (1) improving the quality of academic instruction and level of student achievement; (2) developing exemplary practices to create the working conditions and environment that will attract and retain qualified staff; (3) focusing on instruction and services for students; and (4) improving the distribution of qualified and experienced teachers. Only schools in the bottom two deciles on the 2005 API and schools funded under the state's High-Priority Schools Grant Program will be eligible to apply for participation in the program, which requires schools to reduce class sizes, improve teacher and principal training, and hire counselors. Schools will receive \$500 per student enrolled in grades K-3, \$900 per student enrolled in grades 4-8, and \$1,000 per student enrolled in grades 9-12. Funding will support just 500 to 600 schools, approximately one-third of the 1,600 eligible public schools. The application process for schools will be determined by the State Superintendent of Public Instruction, and the applications will be reviewed by both the State Superintendent and the Secretary of Education, who must jointly submit their recommendations to the State Board of Education. The schools must represent a wide distribution of geographic regions and grade levels.

The budget also provides substantial funding increases for the higher education community to eliminate proposed fee increases and fully fund anticipated enrollment growth. In 2004, higher education funding was cut and student fees were increased dramatically, as part of the "Higher Education Compact" between the Governor and the University of California (UC)

and California State University (CSU) systems. In exchange for short-term budget cuts and higher student fees, the compact guaranteed future funding stability for higher education. This year's budget reduces community college fees from \$26 to \$20 per unit beginning in spring 2007 and maintains current fee levels at UC and CSU. The budget also provides outreach funding for UC (\$19 million) and CSU (\$7 million) to be used to support and prepare high school students for entry into higher education.

In addition to providing increased funding for education, policymakers passed a series of bills in 2006 that address numerous aspects of the teacher development system, from teacher preparation and credentialing, to teacher recruitment and retention, to ongoing teacher professional development. The overall goal of the comprehensive new legislation is to improve teaching and learning in all classrooms across the state while ensuring that students in the lowest performing schools receive the extra resources needed to meet the state's standards. One bill in particular, SB 1209 (Scott), specifically responds to recommendations put forth by the TCF Task Force in the Center's report, *The Status of the Teaching Profession 2005*, to improve the quality of the teacher workforce. Other bills include: SB 1655 (Scott, Chapter 518, Statutes of 2006), which addresses voluntary transfers between schools; SB 1614 (Simitian, Chapter 840, Statutes of 2006), which establishes a teacher data system; and SB 472 (Alquist, Chapter 524, Statutes of 2006), which enhances mathematics and reading professional development (see Chapter 3 for additional information on these bills).

Highlights of the legislation include:

- A focus on low-performing schools by bringing necessary resources to, and improving working conditions in, the schools in the lowest two API deciles (SB 1133) and requiring a more equitable distribution of interns (SB 1209).
- Streamlining entry into the profession through simplified teacher credentialing test requirements and reducing barriers for out-of-state teachers to earn California credentials (SB 1209).
- Improving hiring and assignment practices through new Personnel Management Assistance Teams (SB 1209) and greater principal discretion over voluntary teacher transfers to low-performing schools (SB 1655).

“. . . policymakers passed a series of bills in 2006 that address numerous aspects of the teacher development system, from teacher preparation and credentialing, to teacher recruitment and retention, to ongoing teacher professional development.”

- Ensuring that all new teachers have the support they need by tapping into the pool of experienced, skilled teachers to mentor interns in low-performing schools (SB 1209).
- Providing additional resources for professional development for teachers of ELs (SB 472).
- Enabling districts and bargaining units to develop incentive pay systems that encourage teachers to take challenging assignments and work at high-need schools (SB 1209).
- Establishing a longitudinal teacher data system to track the teacher workforce (SB 1614).

Characterizing this legislation are the dual themes of equity and teacher quality. In low-performing schools, principals will have more discretion in hiring, interns will receive more support from mentors, and resources will be available to improve working conditions. This year's legislative session has thus built on existing state and federal policies that seek to ensure that all students have the most prepared and effective teachers.

CHAPTER SUMMARY

As we consider the status of California's teaching profession in 2006, we have begun with the central issues facing the state's educational system.

We have underscored the fact that, although progress has been made in student achievement, the state is falling far short of its overall goals of having all students reach proficiency. Most startling, the achievement gap between African-American and Latino students and their white and Asian peers is not closing. In response and partly because of a favorable budget environment, state policymakers have achieved consensus in a series of legislative and budgetary initiatives targeted at the lowest performing schools and increasing teacher quality throughout the state. Impetus on both these fronts—equity and teacher quality—continues to come from the federal NCLB requirements and the state's settlement of the *Williams* lawsuit.

In Chapter 2, we discuss current trends in the supply, demand, and distribution of teachers. Chapter 3 provides details on the impact of recent policy changes on the teacher development system, and Chapter 4 highlights themes that emerge from the new policies and programs and assesses the adequacy of the state's efforts. Chapter 5 provides recommendations for next steps to ensure that the state continues to build on the efforts begun this year.

TEACHER SUPPLY, DEMAND, AND DISTRIBUTION

Although the number of fully credentialed teachers in the state has steadily increased over the past few years, persistent gaps remain between low- and high-minority schools and low- and high-income schools, and it is likely that the state will miss federal targets for ensuring that all students have highly qualified teachers. The number of underprepared teachers has been cut in half since 2000-01—from more than 42,000 to fewer than 18,000.

Nonetheless, many California classrooms continue to be staffed with teachers who have not completed the state's minimum qualifications for a teaching credential. Moreover, the state's underprepared and novice teachers continue to be unevenly distributed across different types of schools, despite progress made toward more equitable distribution. California's lowest-performing schools—those where fully prepared and experienced teachers are most needed—persistently have the least prepared teaching staffs. Consequently, despite decreasing numbers of underprepared teachers and their more equitable distribution over the past 5 years, current data indicate that the state will be unable to meet two important NCLB requirements: (1) that all teachers of core classes be highly qualified by the end of the 2006-07 school year, and (2) that novice and veteran teachers be equally distributed across schools. With increasing teacher retirements due to an aging workforce, meeting these goals may become even more difficult, particularly for those localities experiencing large population growth.

In this chapter, we present the data that led to these conclusions about the California teacher workforce. We begin with a profile of the current teacher workforce, first highlighting trends in its size and composition, and then describing the distribution of underprepared and novice teachers. We also focus on the teacher workforce for special education and for mathematics and science. We then discuss the factors that drive the demand for and supply of teachers and the changes to expect in these areas in future years.

SIZE OF THE TEACHER WORKFORCE

The California K-12 teacher workforce is no longer growing at the frenetic pace of the late 1990s and early 2000s. Fueled by the state's class-size reduction program in grades K-3 and increasing student enrollment, the teacher workforce grew by 25%, or more than 59,000 teachers, between 1996-97 and 2002-03. In 2003-04, the growth in the teacher workforce reversed, shrinking by about 3,900 teachers. Since then, the workforce has grown slightly, by about 2,000 teachers, or 0.6%; it still has not reached the high of approximately 310,000 in 2002-03 (see Exhibit 8).

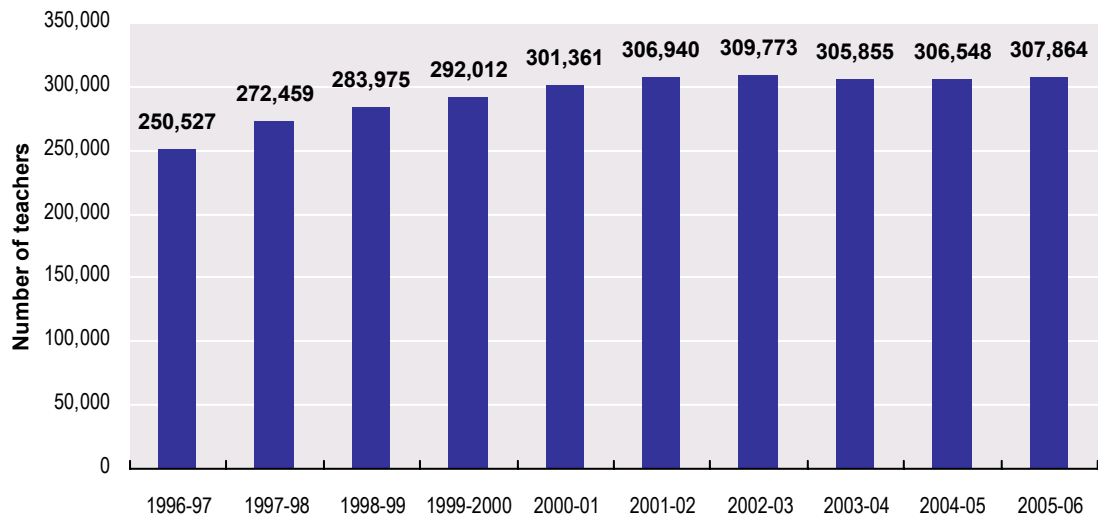
COMPOSITION OF THE TEACHER WORKFORCE

The state's focus on improving student achievement and closing the achievement gap among student subgroups raises questions about the preparation and experience of the teacher workforce. Focus on the composition of the teacher workforce is especially salient given NCLB teacher quality requirements. In this section we explore the prevalence of three types of teachers: (1) underprepared teachers—teachers, including interns and holders of emergency permits and waivers, who have not completed a teacher preparation program; (2) novice teachers—teachers in their first or second year of teaching; and (3) out-of-field teachers—fully credentialed teachers who are teaching subjects for which they do not hold the proper authorization.

Underprepared Teachers

We define an underprepared teacher as any individual who has not completed a teacher preparation program and attained a preliminary or professional clear credential. These include teachers with waivers (for whom one or more requirements for certification have been waived temporarily and who may or may not have demonstrated subject-matter competency),

Exhibit 8
Number of K-12 Teachers in the California Workforce, 1996-97 to 2005-06



(Source: See Appendix A for source and technical information.)

“Over the past 5 years, the number of underprepared teachers in California classrooms has declined.”

emergency-permit holders (who may or may not have demonstrated subject-matter competency and who may or may not be enrolled in a teacher preparation program), and interns (who have demonstrated subject-matter competency and who are enrolled in an intern teacher preparation program). Although interns are considered “highly qualified” under the auspices of NCLB, we consider interns underprepared because they have not met the state’s minimum requirements for a preliminary credential.

Over the past 5 years, the number of underprepared teachers in California classrooms has declined. At its peak in 2000-01, the state had more than 42,000 underprepared teachers. Since then, the number has dropped by 58% to about 17,800. The largest single year drop in underprepared teachers occurred between 2002-03 and 2003-04—from more than 37,000 to fewer than 28,500 (see Exhibit 9). Underprepared teachers represented 6% of the teacher workforce in 2005-06, down from 14% in 2000-01.

Several factors may be responsible for the decline in the number of underprepared teachers. First, the slowed growth in the overall teacher workforce since 2000-01 has tempered the demand for teachers. Second, state policies intended to address the teacher shortage (e.g., the Teacher Recruitment Incentive Program [TRIP] and the Teaching as a Priority [TAP] Block Grant) may have increased the recruitment and retention of fully prepared teachers.¹⁶ Third,

¹⁶ See Chapter 3 for information on these programs.

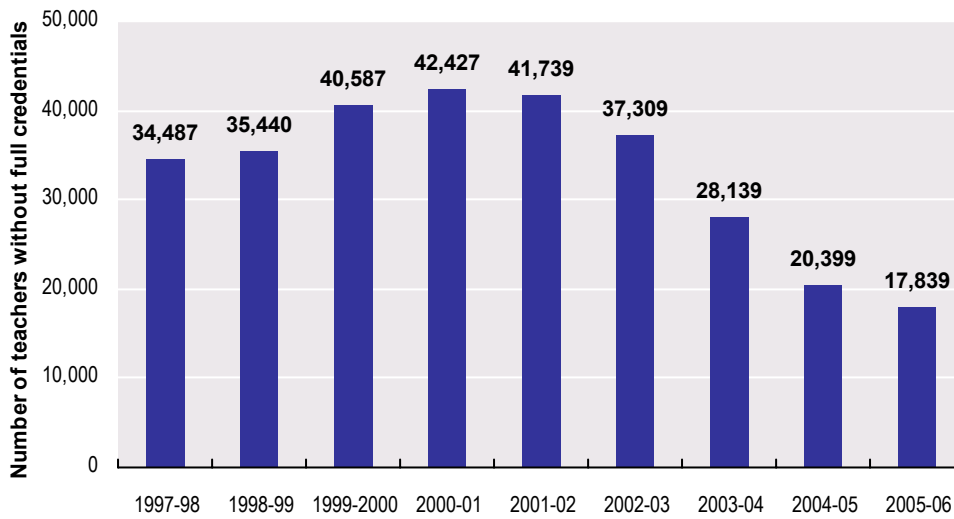
California’s institutions of higher education responded to the shortage by increasing credential production. Finally, as the state’s economy weakened in the early 2000s and job opportunities in the private sector shrank, teaching may have become a more attractive career, both for new college graduates and for displaced workers, and the poor economy may have kept more teachers in the profession.

Along with the overall decline in underprepared teachers, a shift has occurred in the types of credentials and permits held by underprepared teachers.¹⁷ A greater percentage of underprepared teachers now hold intern credentials and, therefore, are compliant with NCLB. In 2005-06, 47% of underprepared teachers (or 8,300 teachers) held intern credentials, up from 44% the previous year. The number and percentage of noncompliant underprepared teachers—those who held emergency permits, waivers, and pre-intern certificates—continued to drop, from 48% of underprepared teachers (9,700 teachers) in 2004-05 to 45% of underprepared teachers (8,000 teachers) in 2005-06 (see Exhibit 10).¹⁸

¹⁷ See Appendix B for a list of NCLB compliant and noncompliant credentials.

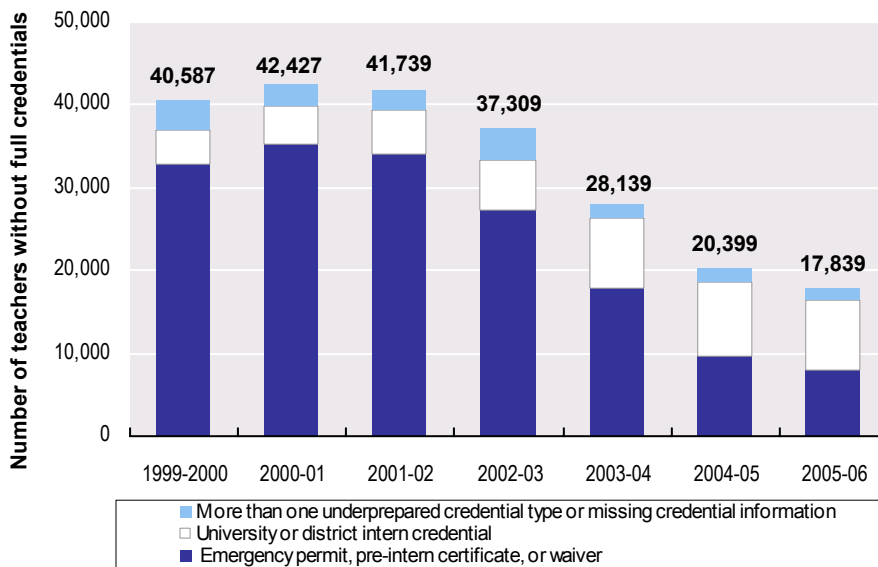
¹⁸ Pre-intern certificates were discontinued in 2004-05.

Exhibit 9
Number of Underprepared Teachers, 1997-98 to 2005-06



(Source: See Appendix A for source and technical information.)

Exhibit 10
Number of Underprepared Teachers by Credential Type, 1999-2000 to 2005-06



(Source: See Appendix A for source and technical information.)

Novice Teachers

We also track the number of novice teachers because teachers in their first years tend to be less effective than their veteran peers (Hanushek et al., 2005). In 2005-06, novice teachers accounted for 12% of the total teacher workforce, down slightly from 15% at the beginning of the decade.¹⁹ Notably, the composition of the novice teacher pool has shifted over time. In 2000-01, almost half (47%) of all novice teachers were underprepared; by 2005-06, less than one-quarter (23%) were underprepared (see Exhibit 11).

Out-of-Field Teachers

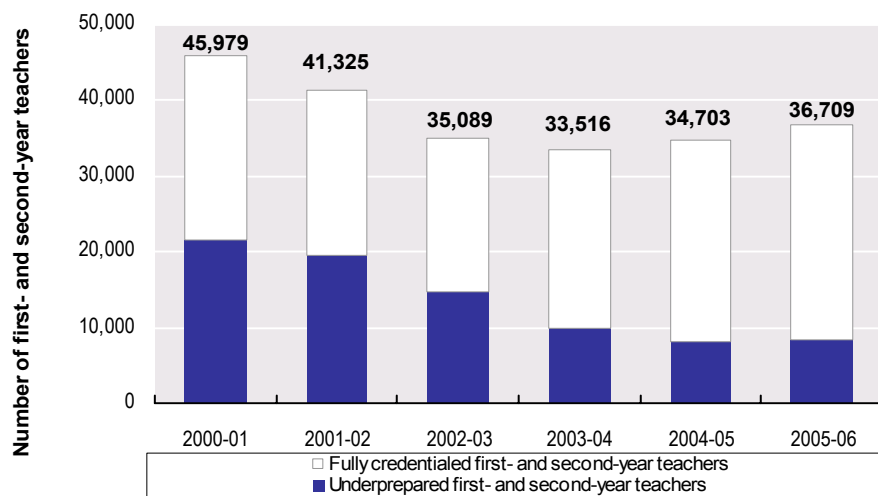
We also track teachers who teach out of field. Out-of-field teachers hold a full credential in a subject area but do not have the proper credential for one or more of the subjects they are teaching. This problem is primarily found in middle and high schools due to the structure of the secondary credentialing system and the departmentalized format of the upper grades.

The extent of out-of-field teaching varies by subject matter, ranging from 11% in life science to 20% in physical science (see Exhibit 12).

Out-of-field teachers made up 12% of all mathematics teachers and 15% of all English teachers, the two subjects tested on the California High School Exit Examination (CAHSEE).

Of particular interest is the high incidence of eighth-grade mathematics teachers who do not hold a single-subject credential in mathematics, given that algebra content has been moved into the eighth-grade curriculum. Although middle school mathematics teachers are not required by state law to hold a mathematics credential, it may be unreasonable to expect teachers with multiple-subject credentials who may have limited mathematics backgrounds to successfully teach the more specialized content that has traditionally been taught at the high school level. Of all middle school algebra teachers, 23% are fully credentialed in some subject area but lack a mathematics authorization. These out-of-field teachers teach nearly 60,000 students statewide. An additional 9% of middle school mathematics teachers do not hold a full credential of any kind. These underprepared teachers teach more than 28,000 students statewide. Thus, more than 88,000 California students are enrolled in middle school algebra classes in which the teacher may not be adequately prepared to teach the subject.

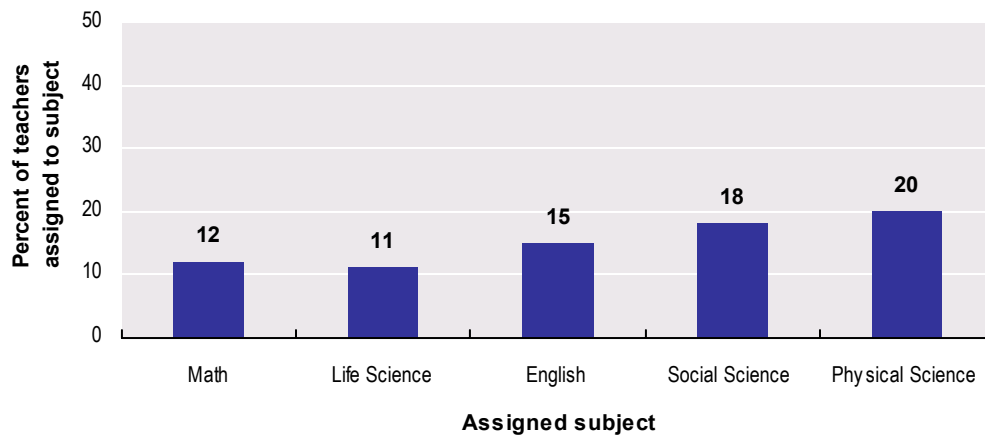
Exhibit 11
Number of Novice Teachers by Credential Status, 2000-01 to 2005-06



(Source: See Appendix A for source and technical information.)

¹⁹ We define novice teachers as those in their first or second year of teaching.

Exhibit 12
Percent of Out-of-Field High School Teachers in Core Subjects, 2005-06



(Source: See Appendix A for source and technical information.)

DISTRIBUTION OF UNDERPREPARED AND NOVICE TEACHERS

New NCLB reporting requirements bring added urgency to ensuring that all students—rich and poor, white and minority—have access to prepared and experienced teachers. Data show clearly, however, that student access to fully prepared teachers is not yet equitable. In this section, we look at how underprepared and novice teachers are distributed across the state and across different populations of students, and how distribution has changed over time.

Statewide Distribution of Underprepared and Novice Teachers

Overall, the state has made progress in reducing the inequitable distribution of underprepared teachers. The percentage of public K-12 schools with 5% or fewer underprepared teachers was 69% in 2005-06 (see Exhibit 13). In 2000-01, just 41% of schools had 5% or fewer underprepared teachers (Shields, Humphrey, Wechsler, Riehl, Tiffany-Morales, et al., 2001). These changes represent a substantial improvement but still point to significant staffing problems for a subset of schools. In 2005-06, 5% of schools (430) had faculties comprised of 20% or more underprepared teachers, down from 24% (or 1,900 schools) in 2000-01. These schools serve more than 280,000 students and are located in 37 of the state’s 58 counties, with most found in urban areas. On

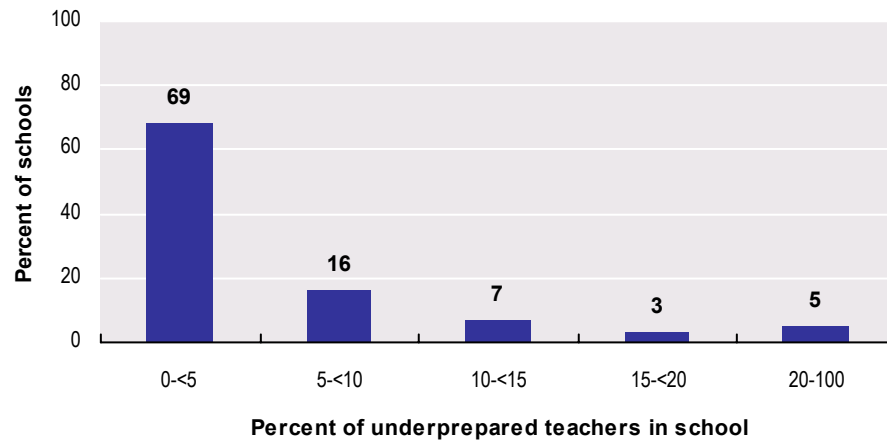
average, these schools serve 17% African-American students and 56% Latino students, compared with the statewide average of 8% African-American students and 48% Latino students. More than 45% of these schools are charter schools.

Focusing solely on the statewide patterns of underprepared teachers masks important regional variations. The approximately 17,800 underprepared teachers in 2005-06 were concentrated in 10 counties. These 10 counties, which accounted for almost 80% of the underprepared teachers in the state, are located primarily in central and southern California and enroll over 70% of the state’s students. Counties with the highest percentages of underprepared teachers (although not necessarily the highest *numbers* of underprepared teachers) span the state, with Imperial County having the highest percentage (12.5%) of underprepared teachers (see Exhibit 14).

In contrast with the case of underprepared teachers, more schools had high percentages of novice teachers in 2005-06 than in the previous year. Specifically, 21% of schools had 20% or more novice faculty in 2005-06, compared with 19% in 2004-05 (see Exhibit 15). These schools may be struggling with high teacher turnover, which means they expend precious resources each year hiring and inducting new teachers, have less professional expertise in the school, and have fewer experienced teachers to serve as mentors and support providers for novice teachers.

“ . . . student access to fully prepared teachers is not yet equitable.”

**Exhibit 13
Percent Distribution of Schools by School-Level
Percentage of Underprepared Teachers, 2005-06**



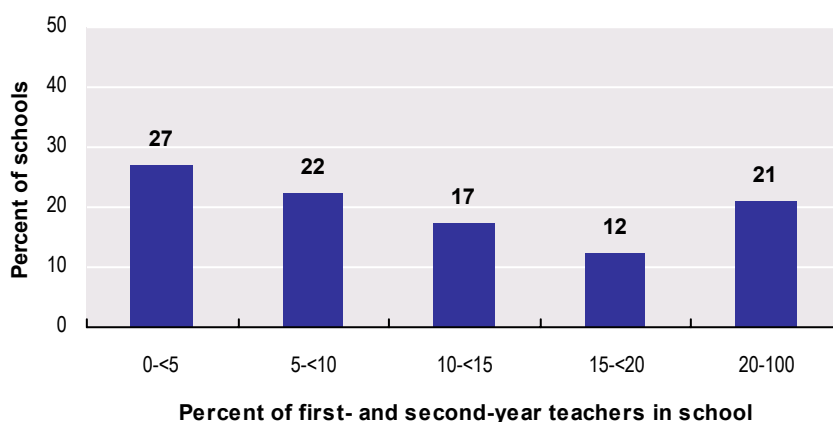
(Source: See Appendix A for source and technical information.)

**Exhibit 14
Top 10 California Counties by Number of Underprepared Teachers and
Top 10 California Counties by Percentage of Underprepared Teachers, 2005-06**

County	Number of Underprepared Teachers	County	Percent of Underprepared Teachers (as a percent of all teachers in the county)
Los Angeles	6,891	Imperial	12.5
San Bernardino	1,332	San Joaquin	10.1
Riverside	1,074	Merced	9.5
San Diego	1,042	Los Angeles	8.5
Santa Clara	743	Lassen	8.3
San Joaquin	698	Napa	7.6
Alameda	692	Yuba	7.3
Orange	611	Contra Costa	7.1
Contra Costa	596	San Bernardino	6.9
Kern	498	San Mateo	6.4

(Source: See Appendix A for source and technical information.)

Exhibit 15
Percent Distribution of Schools by School-Level
Percentage of Novice Teachers, 2005-06



(Source: See Appendix A for source and technical information.)

Distribution of Underprepared and Novice Teachers by School Achievement

Historically, the schools that have the highest percentages of underprepared and novice teachers are the lowest performing schools. In 2005-06, underprepared and novice teachers continued to be maldistributed across high- and low-achieving schools, although the gap has been closing over time. In 2005-06, schools in the lowest achievement quartile on the state’s Academic Performance Index (API) had an average of 9% underprepared teachers, compared with an average of 3% for the highest performing schools. This 6-percentage-point gap is a substantial improvement over the 18-percentage-point difference between the highest and lowest performing schools in 2000-01 (see Exhibit 16).

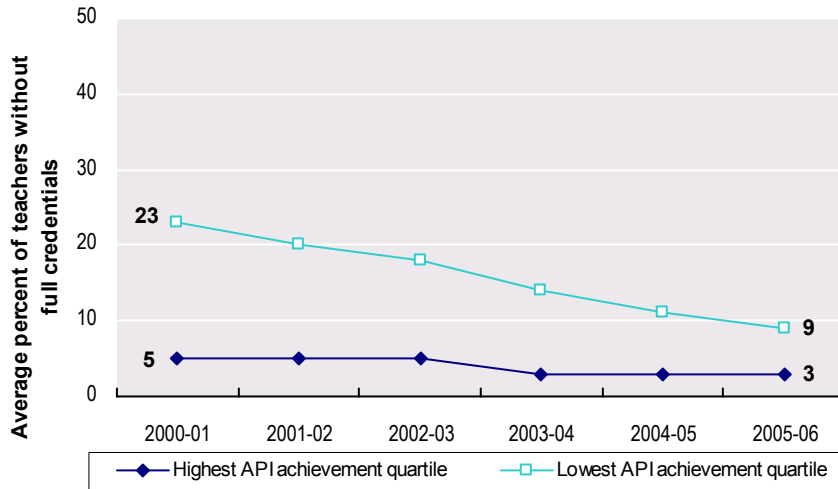
Despite the improvement between high- and low-achieving schools, today’s sixth graders who have attended elementary schools in the lowest-achievement quartile throughout their elementary years have a 41% chance of having been taught by one underprepared teacher and a 24% chance of having had more than one such teacher. This compares with sixth graders who attended schools in the highest achievement quartile throughout their elementary years; they have a 20% chance of having been taught by an underprepared teacher and a 2% chance of having been taught by more than one such teacher (see Exhibit 17).

The maldistribution across low- and high-performing schools is more pronounced when considering both underprepared and novice teachers. In 2005-06, 21% of teachers in schools in the lowest achievement quartile were underprepared, novice, or both, compared with 12% of teachers in the highest achieving schools (see Exhibit 18). Higher percentages of both underprepared and novice teachers mean that over the course of several years at such a school, a student is likely to be taught by more than one underprepared and/or novice teacher, and possibly several such teachers in consecutive years.

The distribution of underprepared teachers shows a similar pattern for achievement on the CAHSEE, with the lowest achieving schools having the highest percentages of underprepared and novice teachers (see Exhibit 19). In 2006, nearly one-third (32%) of faculty in schools with the lowest passing rates on the English portion of the CAHSEE were underprepared and/or novice, compared with 17% in the schools with the highest passing rates.

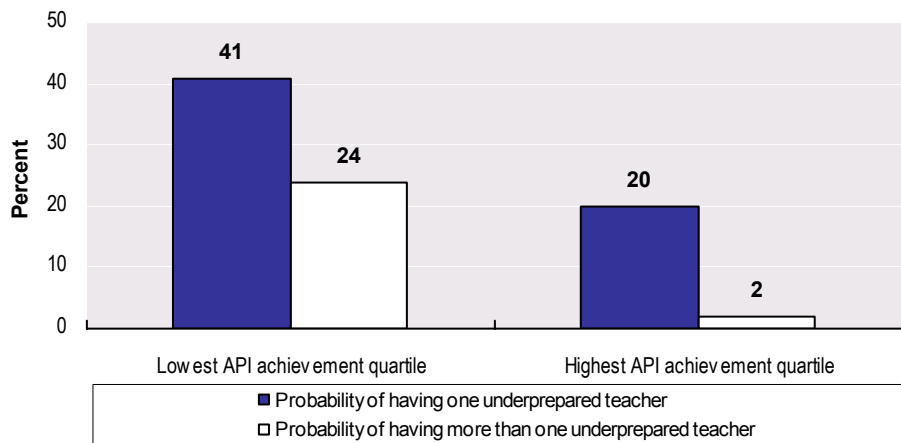
Similarly, 31% of faculty in schools with the lowest passing rates on the mathematics section were underprepared and/or novice in 2006, compared with 17% in schools with the highest passing rates.

Exhibit 16
Percent of Underprepared Teachers in Schools in the Highest and Lowest API Achievement Quartiles, 2000-01 to 2005-06



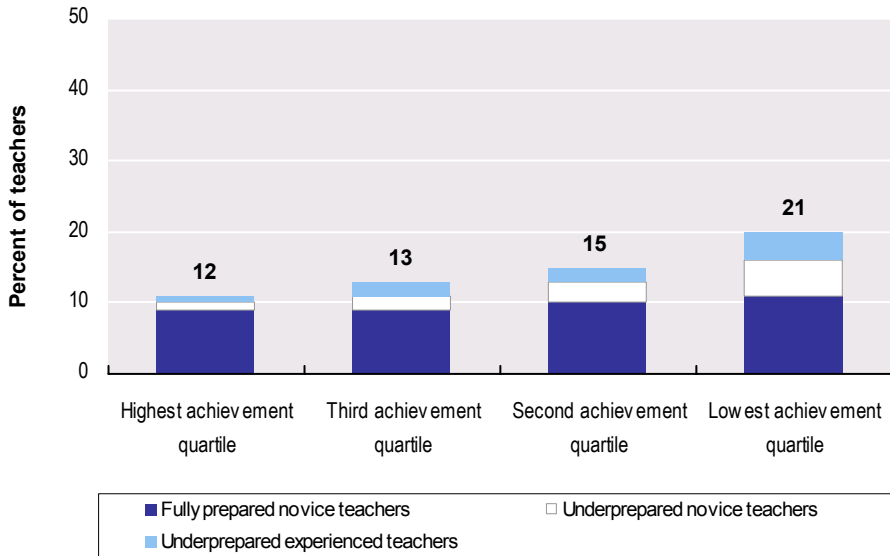
(Source: See Appendix A for source and technical information.)

Exhibit 17
Percent Probability of Having Had an Underprepared Teacher by API Achievement Quartiles



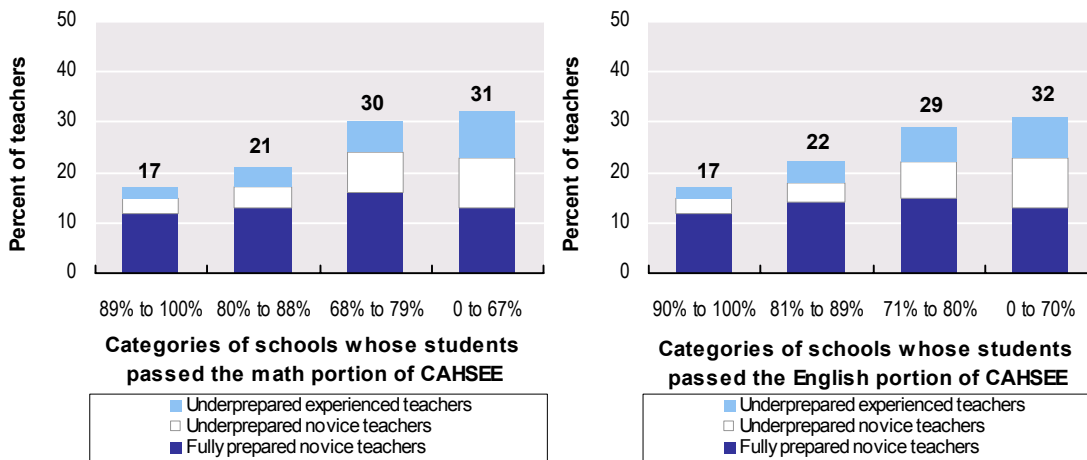
(Source: See Appendix A for source and technical information.)

Exhibit 18
Percent of Underprepared and Novice Teachers by API Achievement Quartiles, 2005-06



(Source: See Appendix A for source and technical information.)

Exhibit 19
Percent of Underprepared and Novice Teachers by School-Level Percentage of 10th-Grade Students Passing the CAHSEE, 2005-06



(Source: See Appendix A for source and technical information.)

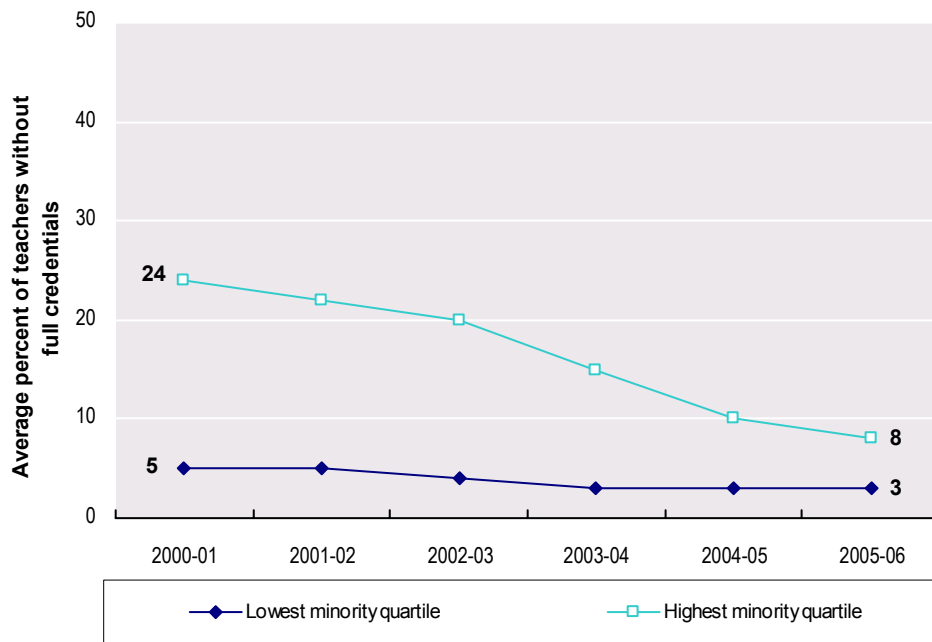
Distribution of Underprepared and Novice Teachers by School Demographics

The equity plan required by the federal government is the only NCLB requirement that focuses specifically on minority students. As was the case for school-level achievement, the gap between high- and low-minority schools is closing; nevertheless, schools with large proportions of minority students continue to be more likely to have underprepared and novice teachers than do schools with few minority students. In schools where students are predominantly from minority backgrounds, 8% of the teachers, on average, were underprepared in 2005-06, compared with 3% of teachers in schools with few minority students (see Exhibit 20).

When novice teachers are combined with underprepared teachers, the lack of access to fully prepared and experienced teachers for students in high-minority schools is further apparent. In 2005-06, 18% of teachers serving in schools with high percentages of minority students were underprepared and/or novice, compared with 11% of teachers in schools serving few or no minority students (see Exhibit 21).

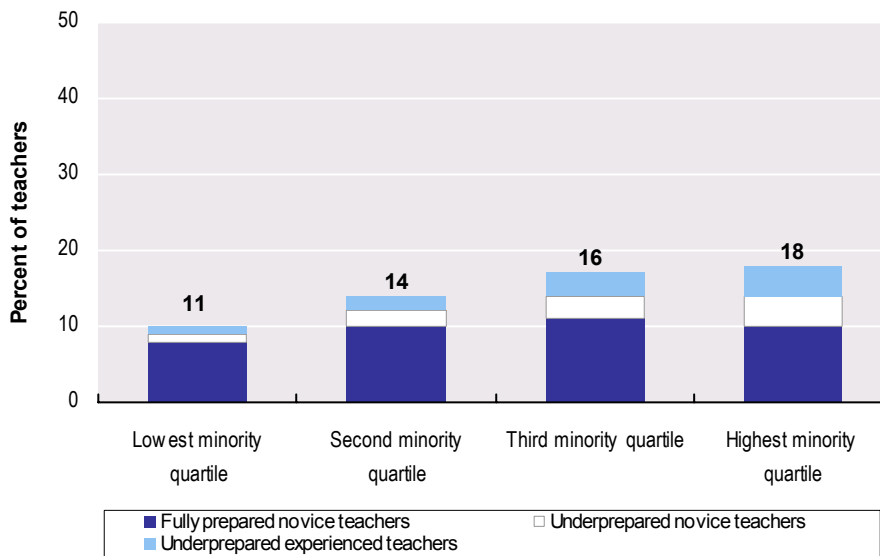
Likewise, 44% of all interns are found in schools serving high proportions of minority students (see Exhibit 22). Only 7% of interns are in the lowest minority schools.

Exhibit 20
Percent of Underprepared Teachers in Schools with the Highest and Lowest Percentages of Minority Students, 2000-01 to 2005-06



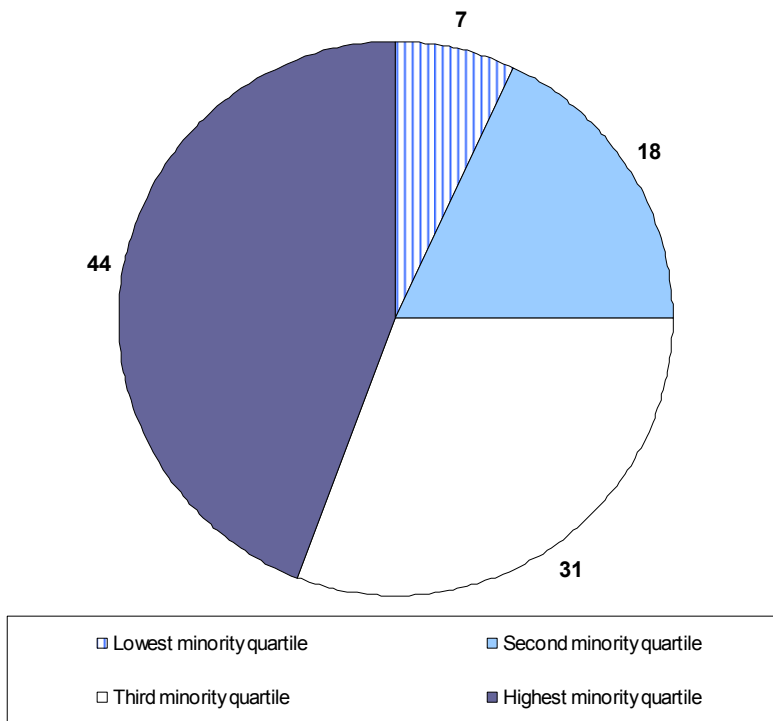
(Source: See Appendix A for source and technical information.)

Exhibit 21
Percent of Underprepared and Novice Teachers by
School-Level Percentage of Minority Students, 2005-06



(Source: See Appendix A for source and technical information.)

Exhibit 22
Percent Distribution of Interns by School-Level
Percentage of Minority Students, 2005-06



(Source: See Appendix A for source and technical information.)

A FOCUS ON THE SPECIAL EDUCATION TEACHER WORKFORCE

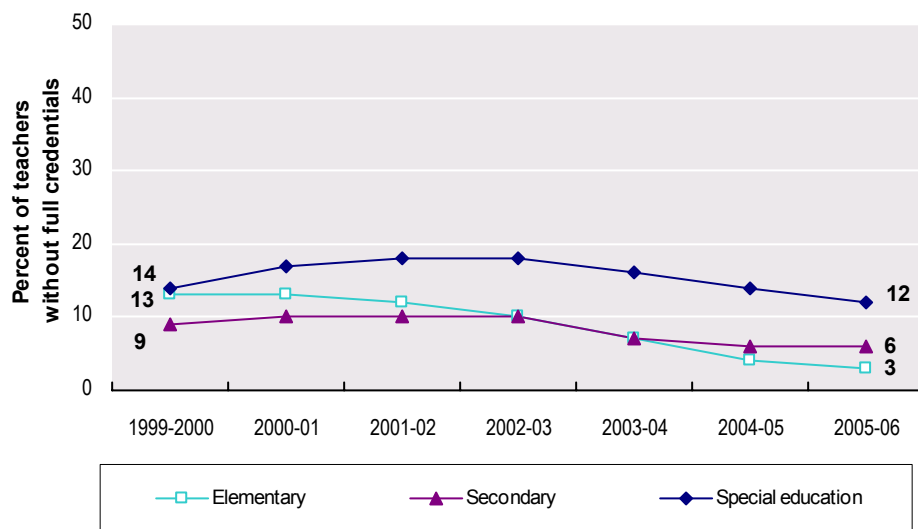
Attracting prepared and experienced teachers is particularly difficult in special education, even for districts that do not have staffing problems in other subject areas. Although the teacher shortage has lessened in severity overall, in comparison with general education the proportion of underprepared teachers in special education has declined at a much slower rate, and special education continues to be the area with the highest percentages of underprepared teachers. In 2005-06, 12% of teachers authorized to teach special education were underprepared, down from 14% in 2004-05 (see Exhibit 23). In contrast, 3% of elementary teachers and 6% of secondary teachers were underprepared in 2005-06.

“Schools serving high proportions of minority students were more than twice as likely in 2005-06 to have underprepared special education teachers, as were schools serving few minority students.”

When novice teachers are considered as a separate category, the numbers are even more striking. Despite overall improvements in the preparedness of novice teachers, in 2005-06, nearly half (45%) of novice special education teachers did not hold full credentials, compared with only 13% in elementary education and 25% in secondary education (see Exhibit 24).

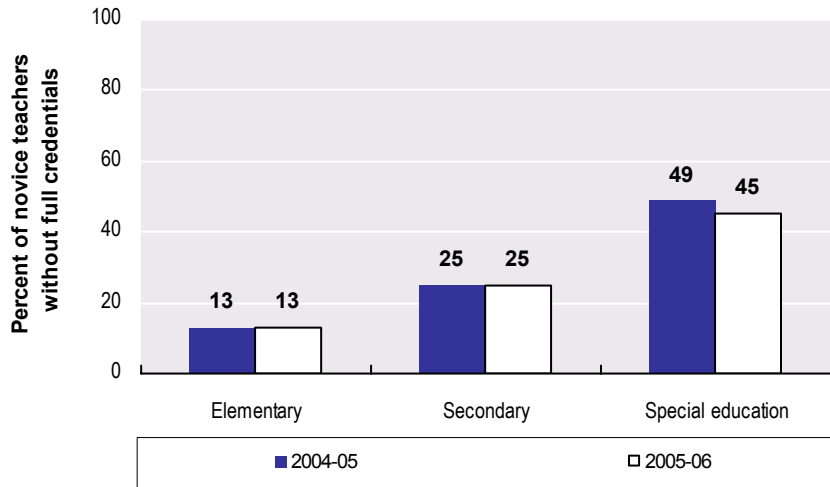
Moreover, the maldistribution of underprepared special education teachers is pronounced. Schools serving high proportions of minority students were more than twice as likely in 2005-06 to have underprepared special education teachers, as were schools serving few minority students (see Exhibit 25).

Exhibit 23
Percent of Underprepared Teachers by Type of Authorization, 1999-2000 to 2005-06



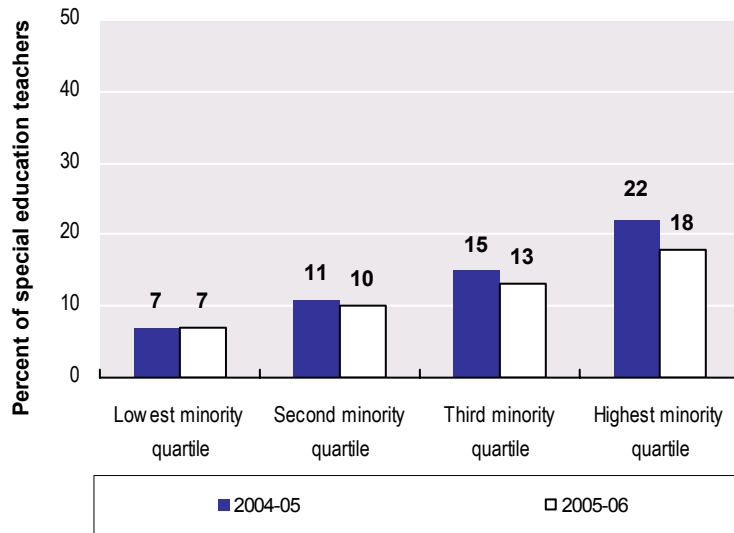
(Source: See Appendix A for source and technical information.)

Exhibit 24
Percent of Underprepared First- and Second-Year Teachers, 2004-05 and 2005-06



(Source: See Appendix A for source and technical information.)

Exhibit 25
Percent of Underprepared Special Education Teachers by School-Level Percentage of Minority Students, 2004-05 and 2005-06



(Source: See Appendix A for source and technical information.)

A FOCUS ON THE SCIENCE AND MATHEMATICS TEACHER WORKFORCE

Given the increased state and national focus on improving mathematics and science education, understanding the status of the teacher workforce in these content areas is necessary. For years, California has had a persistent shortage of credentialed mathematics and science teachers. Although the percentage of underprepared mathematics and science teachers has dropped considerably over the last 5 years, the percentage of underprepared teachers in the two fields continues to be higher than for the state teacher workforce as a whole (see Exhibit 26). At the middle school level, the percentage of underprepared mathematics and science teachers declined by about half between 2001-02 and 2005-06, from 20% to 9% in mathematics and from 22% to 8% in science. Less progress has taken place at the high school level, however, particularly in mathematics, where the percentage decline in underprepared teachers over the last 5 years was smaller—from 18% to 12%. The percentage of underprepared high school science teachers declined from 17% to 9% during the same period.

The trends for novice mathematics and science teachers mirror those of underprepared teachers. The percentage of novice mathematics and science teachers has declined slightly over the last 5 years, but the proportion of novices among mathematics and science teachers remains higher than for the statewide teacher workforce as a whole. In 2005-06, 17% of middle school mathematics and 16% of middle school science teachers were in their first or second year of teaching, down from 19% and 21%, respectively, in 2001-02. The percentage of first- and second-year high school mathematics and science teachers decreased from 17% to 16% over the same 5 years.²⁰

More problematic, however, is that large percentages of novice mathematics and science teachers are underprepared (see Exhibit 27). In 2005-06, nearly one-third (29%) of novice middle school mathematics and science teachers were underprepared; even greater percentages of novice high school mathematics and science teachers were underprepared—40% and 35%, respectively. Although the percentage of all underprepared novice teachers has decreased since 2001-02, the discrepancy between mathematics and science teachers and all other teachers persists.

Like the teacher workforce as a whole, the distribution of underprepared mathematics and science teachers has improved over the last 5 years; however, gaps remain between schools with high and low percentages of minority students, and between low- and high-performing schools (see Exhibits 28 and 29). In 2005-06, 16% of mathematics teachers and 14% of science teachers in high-minority middle and high schools were underprepared, compared with 4% and 3% of mathematics and science teachers, respectively, in low-minority schools. Similar patterns hold when looking at schools' API: 18% of mathematics teachers and 16% of science teachers were underprepared in low-performing middle and high schools, compared with 5% and 4%, respectively, in high-achieving schools.

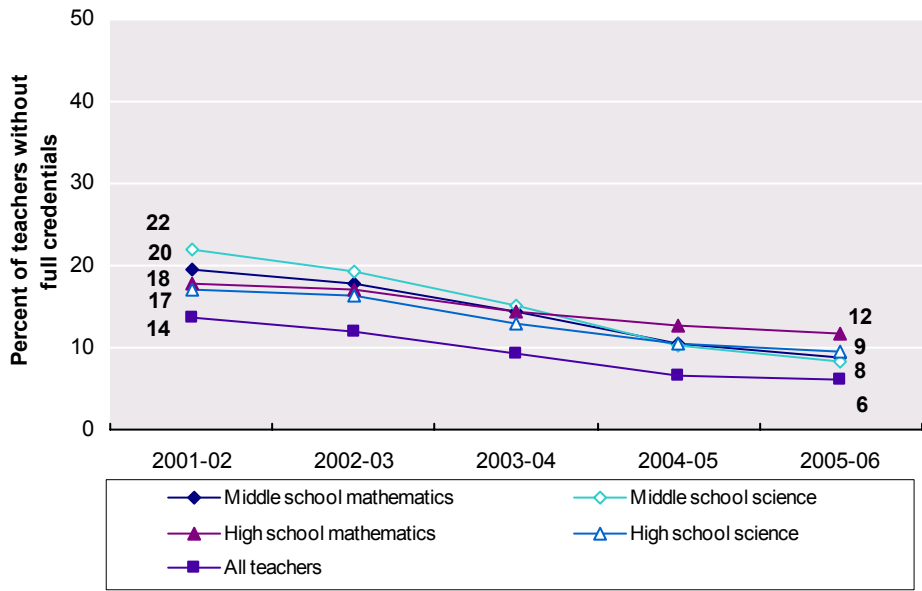
Despite efforts to improve the mathematics and science teacher workforce, relatively less attention has been paid to the science preparation of California's elementary teachers. Elementary teachers are responsible for teaching science as part of a comprehensive elementary curriculum and providing students with a foundation on which to build in their later years. Most teachers at this level hold a multiple-subject teaching credential that authorizes the holder to teach in a self-contained classroom. Unlike single-subject credential holders, multiple-subject credential holders do not specialize in a content area; rather, they have, at a minimum, familiarity with all subject areas.

“Despite efforts to improve the mathematics and science teacher workforce, relatively less attention has been paid to the science preparation of California’s elementary teachers.”

²⁰ SRI analysis of CBEDS data; data not shown.

Exhibit 26

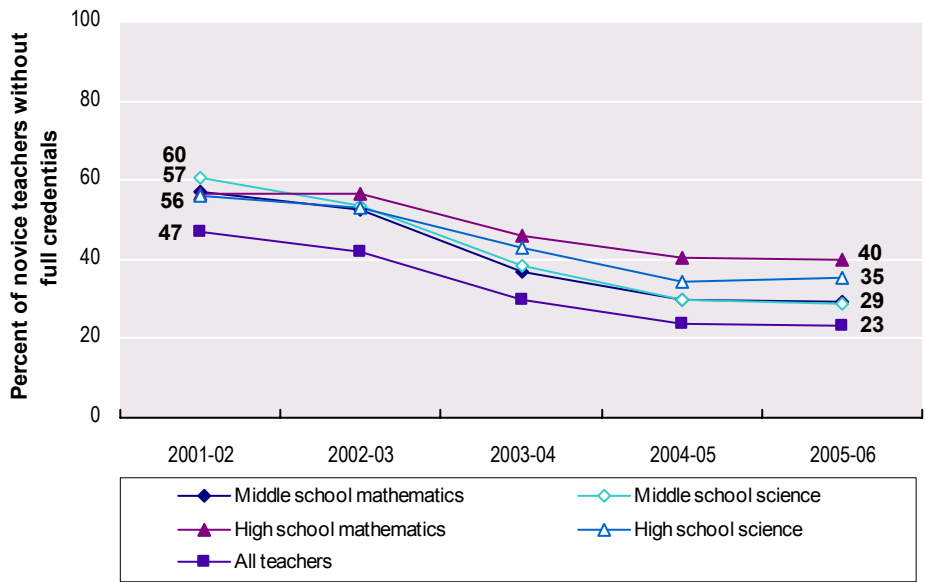
Percent of Underprepared Mathematics and Science Teachers, 2001-02 to 2005-06



(Source: See Appendix A for source and technical information.)

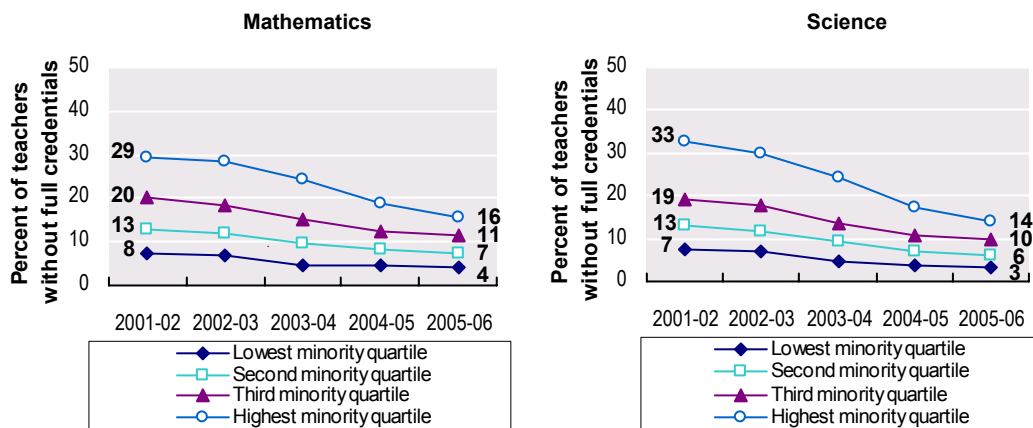
Exhibit 27

Percent of Underprepared First- and Second-Year Mathematics and Science Teachers, 2001-02 to 2005-06



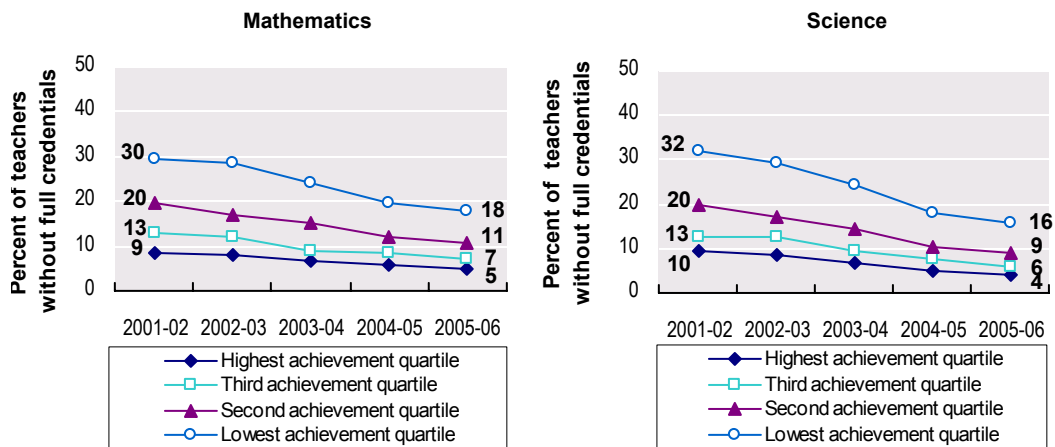
(Source: See Appendix A for source and technical information.)

Exhibit 28
Percent of Underprepared Mathematics and Science Teachers by
Percentage of Minority Students in Middle and High Schools, 2001-02 to 2005-06



(Source: See Appendix A for source and technical information.)

Exhibit 29
Percent of Underprepared Mathematics and Science Teachers
by Middle and High School API Quartiles, 2001-02 to 2005-06



(Source: See Appendix A for source and technical information.)

LOOKING AHEAD: FUTURE SUPPLY OF AND DEMAND FOR TEACHERS

Although the number of underprepared teachers in California schools has declined over the last 5 years, some troubling signs indicate that this trend may reverse itself. Trends in student enrollment, teacher retirement, and teacher credential production suggest that a shortage of prepared and experienced teachers could continue, particularly in the state’s fastest growing localities. In this section, we explore factors affecting the future supply of and demand for teachers.

Demand for Teachers

The demand for new teachers is determined primarily by changes in student enrollment and teacher retirement and attrition rates. In addition, SB 1133 contains a class-size reduction provision that also may affect the demand for new teachers.

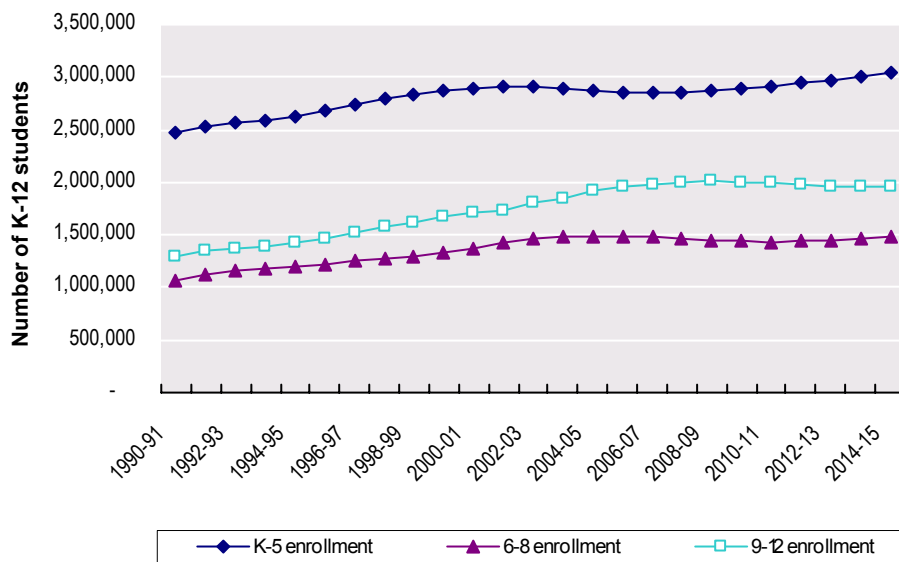
Student Enrollment Growth. The number of K-12 students enrolled in California schools declined slightly for the first time in a quarter century, from 6,322,098 in 2004-05 to 6,312,098 in 2005-06. The decline may be attributable to several factors, including the state’s high cost of living, local job losses, changes in migration patterns, and lower fertility rates (Saillant, 2006). The California Department of Finance’s (CDOF’s) revised enrollment projections anticipate slow growth in

student enrollment—an average of 0.31% per year until 2014-15 (CDOF, 2005).

A look at student enrollment by grade level indicates that enrollment in the elementary grades continues to decline, whereas high school enrollment continues to increase. The trend is projected to reverse starting in 2008-09, when enrollment growth in the elementary grades is projected to increase at the same time that high school enrollment begins to decline. However, teachers cannot move easily between elementary and high school because these positions require different types of preparation and different credentials. Therefore, declining demand at the high school level does not offset increasing demand at the elementary school level. Middle school enrollment is projected to remain relatively flat through 2014-15 (see Exhibit 30).

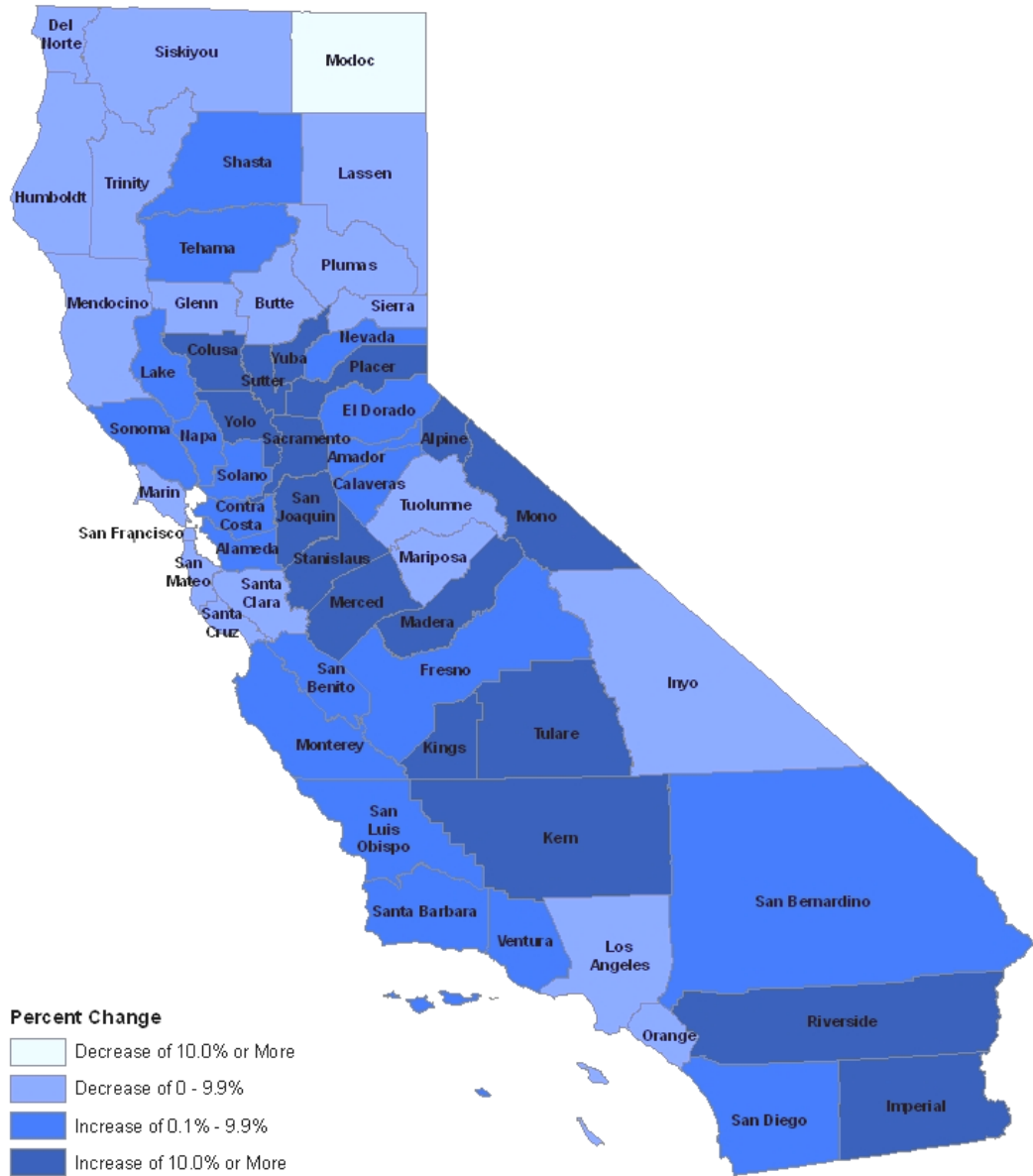
Despite the prediction of slowing student enrollment growth statewide, patterns in enrollment are complex, with substantial regional variations. Student enrollment is projected to decline in high-cost coastal regions, especially around Los Angeles and the Bay Area, whereas enrollment is projected to grow in inland counties, such as Riverside, Kern, and San Bernardino (see Exhibit 31). (In fact, the teacher workforce in the three counties increased between 2001-02 and 2005-06 by 14%, 10%, and 6%, respectively.) With enrollment expected to grow in these regions, their need for teachers will continue to grow as well.

Exhibit 30
Actual and Projected K-12 Public School Enrollment, 1990-91 to 2014-15



(Source: See Appendix A for source and technical information.)

**Exhibit 31
Projected K-12 Public School Enrollment Change by County, 2004 to 2014**



Map Prepared by the California Department of Finance, Demographic Research Unit

(Source: See Appendix A for source and technical information.)

Teacher Retirements and Attrition.

In addition to student enrollment, the demand for teachers is affected by teacher retirements and attrition. Over the last 10 years, annual teacher retirements have increased by 66%, from nearly 7,000 in 1995-96 to approximately 11,600 in 2004-05. Although slightly fewer teachers retired in 2004-05 than in the previous year, teacher retirements remained historically high (see Exhibit 32). Further, the age distribution of the current teacher workforce indicates that the state should be anticipating an increase in the number of retirements over the next 10 years. In 2005-06, California employed more than 53,000 teachers who were older than 55 and more than 98,000 teachers who were older than 50 (see Exhibit 33). If all these teachers retire at the average teacher retirement age of 61, California will need to replace 53,000 teachers in the next 5 years. Over the next 10 to 11 years, the state will have to replace 98,000 teachers, or 32% of the teacher workforce in 2005-06.

In addition to retirement, attrition creates demand for additional teachers. Unfortunately, statewide data systems do not allow for precise analyses of teacher attrition. Given the importance of this factor in determining teacher demand, the state would be well served by a data system capable of tracking where teachers go when they leave a classroom assignment, and indicating why they leave the profession, whether they go to another district, or whether they take another position within the district, among other variables. New legislation, SB 1614, establishes a longitudinal teacher data system that would help track the teacher workforce and provide information about teacher attrition.

Class-Size Reduction in Response to SB

1133. As described in Chapter 1, the Quality Education Investment Act (QEIA) implements the settlement agreement between the California Teachers Association (CTA) and the Governor. The enacting legislation, SB 1133, which applies to schools in deciles 1 and 2, requires that schools receiving funding under this bill maintain an average student:teacher

ratio of 20:1 in grades K-3; an average ratio that is the lesser of either 25:1 or 5 less than was the average in 2005-06 for self-contained classrooms in grades 4-8, with no single class exceeding 27 students regardless of school average; and a ratio of 25:1 in mathematics, reading, language arts, science, and history classes in grades 4-12, with no class exceeding 27 unless the classes were smaller in 2005-06 (in which case schools maintain the smaller number, less 5). Assuming 500 schools are funded under SB 1133, and that the percentage of funded elementary, middle, and high schools mirrors the percentage of schools at each level in deciles 1 and 2, we estimate that an additional 4,300 classes will need to be created statewide—approximately 55% at the high school level—contributing to the demand for new teachers.

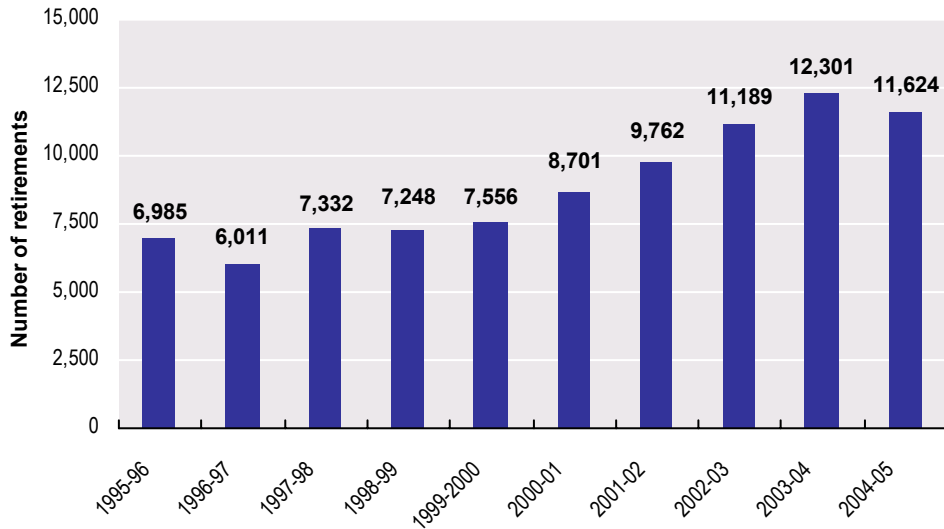
Supply of Teachers

The supply of teachers primarily comes from newly credentialed teachers, although teachers moving in from out of state and those rejoining the workforce after periods of leave also contribute to the supply.

New Teacher Credentials. After years of steady growth, California's teacher preparation system is experiencing both declining enrollment and a fluctuation in the numbers of credentials issued. Enrollment in teacher preparation programs declined by 9%—from 73,211 in 2002-03 to 66,493 in 2003-04 (see Exhibit 34).

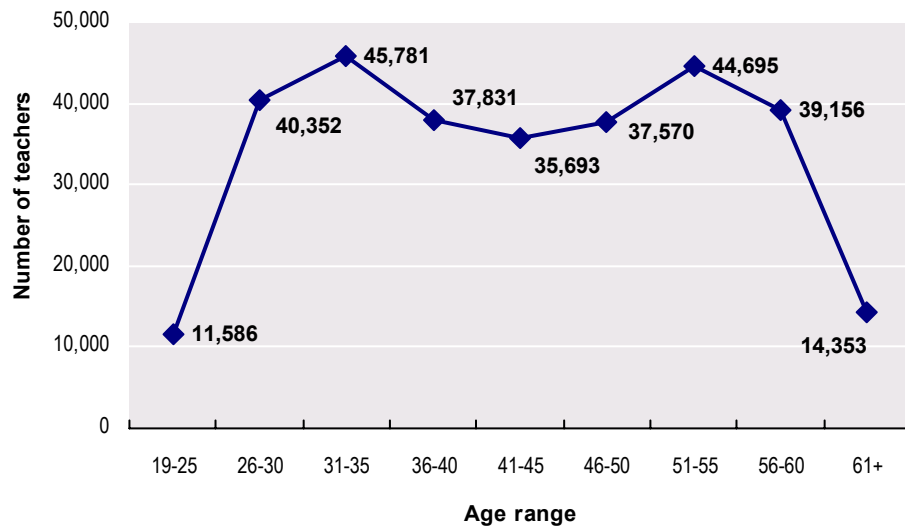
Participation in intern programs, a subset of teacher preparation enrollments, followed the general enrollment patterns, declining from 8,880 participants in 2003-04 to 8,341 participants in 2004-05. In turn, fewer credentials were issued to new interns in 2004-05 than in the previous year. The number of new intern credentials declined by 26%, from 7,072 in 2003-04 to 5,232 in 2004-05. The number of university intern credentials dropped from 6,197 to 4,486, a decline of 28%, and the number of district intern credentials decreased from 875 to 746, a decline of 15% (see Exhibit 35).

Exhibit 32
Number of California State Teachers' Retirement System (CalSTRS)
Membership Retirements, 1995-96 to 2004-05



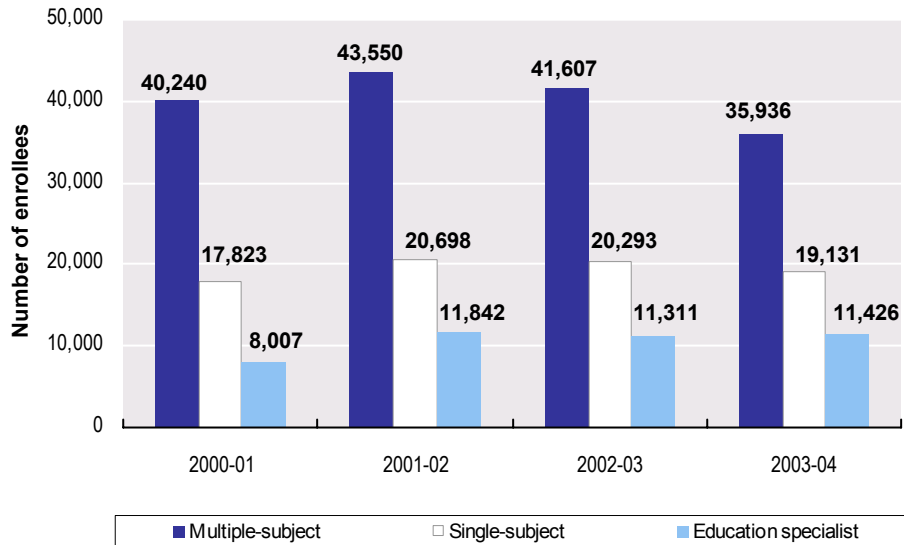
(Source: See Appendix A for source and technical information.)

Exhibit 33
Age Distribution of K-12 Public School Teachers, 2005-06



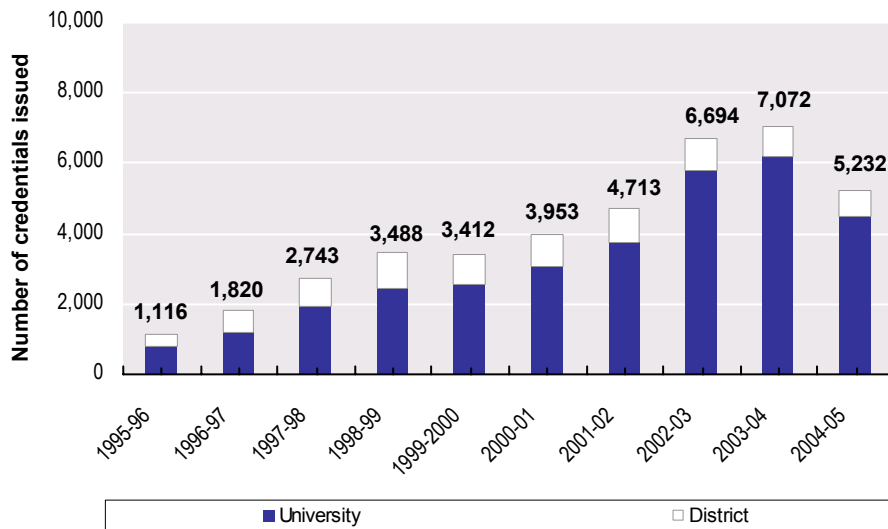
(Source: See Appendix A for source and technical information.)

Exhibit 34
Number of Enrollees in Teacher Preparation Programs, 2000-01 to 2003-04



(Source: See Appendix A for source and technical information.)

Exhibit 35
Number of New University and District Intern Credentials Issued, 1995-96 to 2004-05



(Source: See Appendix A for source and technical information.)

Credential production, another indicator of teacher supply, rose annually from 1997-98 to 2001-02, from about 16,800 to more than 23,000. Since 2001-02, credential production has fluctuated annually (see Exhibit 36). Although the number of credentials issued remains historically high, the state continues to face a shortage of credentialed teachers.

Reentrants and Teachers from Out of State. Besides newly credentialed teachers, California classrooms have other sources of teachers to fill vacancies. One source consists of teachers who return to the classroom after leaves of absence. The number of teachers reentering the workforce each year cannot be calculated easily, however, because publicly available state data files do not contain individual identifiers that allow for the tracking of teacher movement in and out of the school system. Having access to an accurate count would not only allow for a better estimate of future supply, but also might facilitate future research on why teachers leave, how long they are gone, and what influences them to return or not return to teaching.

Individuals trained in other states who move to California to teach also add to the supply of fully credentialed teachers. Since 1998, the state has enacted policies to lower barriers and streamline the process for teachers trained out of state to receive full credentials in California,²¹ and the policies may have been responsible for the increase in the number of these teachers receiving full credentials in California between 1999-2000 and 2001-02. However, since 2001-02, the number of out-of-state credentials has declined considerably, down from 5,629 in 2001-02 to 3,304 in 2004-05 (see Exhibit 37). Of the 3,304 credentials issued in 2004-05 to teachers trained out of state, 1,423 were multiple-subject credentials, 1,564 were single-subject credentials, and 317 were special education credentials. One piece of new legislation, SB 1209, further eases the process for teachers trained out of state, and may help increase the supply of teachers from this source.²²

Planning for the Future

Projected student enrollment trends show that certain regions of the state will continue to experience student enrollment growth and therefore continued demand

for fully credentialed teachers. In fact, 7 of the 10 counties with the greatest percentages of underprepared teachers are those counties for which the CDOF projects an increase in student enrollment. Further, the age distribution of the teacher workforce indicates that schools and districts should be bracing themselves for a wave of teacher retirements. In the face of impending increases in the demand for teachers, teacher preparation programs across the state are experiencing declining enrollment. Together, these trends indicate that California's teacher shortage is far from over.

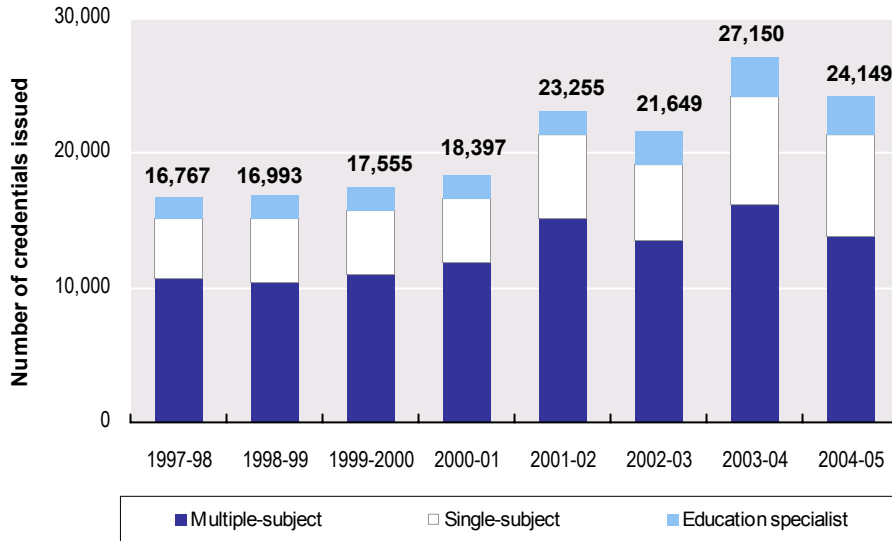
Can the state be more proactive in addressing shortages where they exist? And can the state be more proactive in staving off further shortages in the future? Part of the problem is that the state currently does not have a data system that will allow policymakers to plan to meet future demand for fully credentialed teachers. SB 1614, which establishes the California Longitudinal Teacher Integrated Data Education System (CALTIDES), may finally make it possible for policymakers to plan for expected growth in the demand for teachers. The 2006-07 budget allocates \$938,000 to the California Department of Education and the California Commission on Teacher Credentialing to contract for the development of this important database.

CALTIDES will consolidate information that is currently collected by numerous state agencies into one database. The database will use unique identifiers with the goal of tracking teachers' credentials, age, geographic distribution, enrollment in programs, and assignments. The database is intended to enable the analysis of teacher workforce trends, including mobility, retention, and attrition, and the projection of teacher retirements; to promote more efficient monitoring of teacher assignments; and to provide for evaluations of teacher preparation, induction, and professional development programs. However, building the database will take several years. CALTIDES is expected to be operational by 2010 or 2011.

²¹ See, for example, AB 1620 (Chapter 547, Statutes of 1998), AB 877 (Chapter 703, Statutes of 2000), and AB 3001 (Chapter 902, Statutes of 2004).

²² See Chapter 3 for additional details on SB 1209.

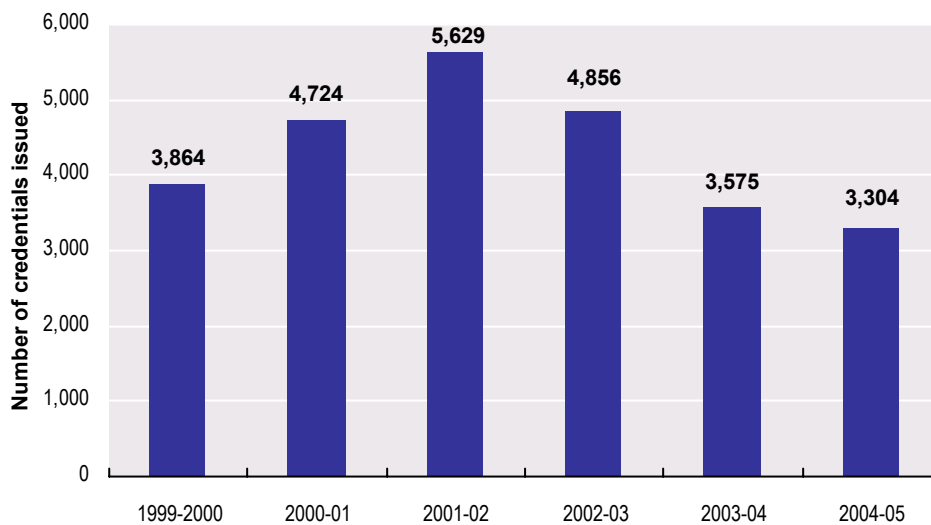
Exhibit 36
Number of New Preliminary Teaching Credentials Issued, 1997-98 to 2004-05



Note: Education-specialist credentials authorize the holder to teach students with disabilities.

(Source: See Appendix A for source and technical information.)

Exhibit 37
Number of California Credentials Issued to Teachers Trained Out of State, 1999-2000 to 2004-05



(Source: See Appendix A for source and technical information.)

CHAPTER SUMMARY

After suffering from severe shortages of fully credentialed teachers during the late 1990s and early 2000s, California's public K-12 education system has made significant strides in reducing the number of underprepared teachers in California classrooms. Even more importantly, the distribution of underprepared and novice teachers is becoming more equitable across schools serving different proportions of minority students. The maldistribution continues, however, and students in schools serving high percentages of minority students continue to be more likely to be taught by less experienced and underprepared teachers. Further, special education continues to be an area of great concern, with that area having the highest percentage of underprepared teachers overall, the highest percentage of novice underprepared teachers, and a persistent maldistribution of fully prepared teachers across high- and low-minority schools.

Science and mathematics also have a higher proportion of underprepared and novice teachers than the teacher workforce overall, and despite progress, the underprepared teachers in these fields remain inequitably distributed so that they are more prevalent in high-minority and low-performing schools.

In spite of the progress made thus far, California is unlikely to meet the NCLB highly qualified teacher requirements, nor will California be able to report an equitable distribution of prepared and experienced teachers for poor and minority students. Moreover, with some counties in the state facing the highest percentages of underprepared teachers, continued student enrollment growth, increased retirements statewide, and declining enrollment in teacher preparation programs, the demand for fully credentialed teachers is expected to grow. In the next chapter, we discuss state policies implemented during the 2006 legislative session designed both to ensure an adequate supply of teachers and to strengthen the quality of the teacher workforce.

STRENGTHENING THE TEACHER DEVELOPMENT SYSTEM

Over the past 10 years, California policymakers have responded to trends in the teacher workforce and student achievement with efforts to strengthen the state's teacher development system. The logic influencing these policies has been that becoming an accomplished teacher involves high-quality preparation along with ongoing support and training once in the classroom. The state has invested in efforts to recruit promising individuals into the profession, increased the capacity of the teacher preparation system to produce more and better teachers, created the nation's largest and most comprehensive beginning teacher induction program, and devoted resources to a myriad of professional development programs. Although budget shortages in recent years restricted state spending, this year's improved state economy has provided legislators with the opportunity to increase investments in and refine the state's teacher development system. During the 2006 legislative session, policymakers passed a comprehensive package of bills designed to work together to strengthen the teacher workforce and improve teacher quality, and to target new resources to the schools that need them the most.

However, as we illustrated in Chapter 1, California has a long way to go to meet heightened expectations for student achievement and teacher quality. The question for the coming years is: Are the new investments and policy changes likely to contribute to meeting those expectations? To begin to address this question, this chapter reviews California's new policy initiatives in the areas of teacher recruitment and hiring, preparation, induction, and professional development.

TEACHER RECRUITMENT, HIRING, AND COMPENSATION

At the peak of California's teacher shortage in the late 1990s and early 2000s, state policymakers invested heavily in a variety of recruitment initiatives, including regional teacher recruitment centers, an online job

bank, tuition and fee assistance programs, and substantial grants for low-performing schools to recruit and retain credentialed teachers (see Exhibit 38). However, as the teacher shortage eased and as the state faced a severe budget crisis, these programs were cut. Now with a stronger economy and warnings about the looming retirement boom, the state is again investing in teacher recruitment. While maintaining some financial support for students preparing to become teachers, the state has added significant resources that schools and districts can use to attract teachers. Policymakers also implemented new initiatives to improve hiring and compensation practices, including the creation of county-level personnel management teams to assist districts, changes to voluntary transfer provisions in bargaining agreements, and support for the implementation of incentive pay structures. These efforts are targeted to ensure that the schools that are hardest to staff can recruit and retain the most well-prepared and experienced teachers.

Financial Incentives for Prospective Teachers

As the teacher workforce ages and increasing numbers of teachers retire, recruiting new teachers into the profession becomes an even greater imperative to ensure a well-prepared and effective teacher in every classroom. In response to the recent teacher shortage, policymakers created several programs that offered financial incentives for students seeking to enter the teaching profession (see Exhibit 38). The Cal Grant T program and the Governor's Teaching Fellowships offered tuition and fee assistance to prospective teacher candidates who agreed to teach in low-performing schools. The Teacher Retention Tax Credit gave teachers increasing state tax credits based on

“Policymakers also implemented new initiatives to improving hiring and compensation practices.”

Exhibit 38
Discontinued and Inactive Teacher Recruitment Programs

Program	Description	Funding History
Teacher Recruitment Incentive Program (TRIP)	Created in 2000, TRIP established six regional teacher recruitment centers to address the teacher shortage. Centers assisted school districts in recruiting qualified teachers to low-performing and hard-to-staff schools.	Funding was \$9.4 million annually from 2000-01 to 2002-03, but funding was suspended in 2003-04. A few centers continue to exist, but they are no longer funded by the state.
California Center for Teaching Careers (CalTeach)	Created in 1997 to serve as a “one-stop information, recruitment, and referral service” for prospective teachers, CalTeach maintained a call center, a Web site, and two regional offices; it engaged in outreach and advertising to recruit individuals to the profession.	Funding peaked at \$11 million in 2000-01 and 2001-02 but was suspended in 2003-04. (CalTeach’s Web site was replaced by the TEACH California Web site, which provides information to prospective teachers.)
Governor’s Teaching Fellowship	Created in 2000 to attract and retain qualified individuals to the teaching profession, the program provided \$20,000 for tuition and living costs to individuals pursuing a first teaching credential if they agreed to teach for at least 4 years in a low-performing school.	Funded for only 2 years, the program received \$21.1 million in 2001-02 but was suspended in 2002-03.
Cal Grant T	Created in 1998, the program provided tuition and fee assistance to students in teacher preparation programs who agreed to teach in a low-performing school for at least 1 year.	Funded at \$10 million annually between 1998-99 and 2001-02, the program was discontinued in 2003-04.
Teacher Retention Tax Credit	First offered in 2000, the tax credit allowed teachers to claim a state income tax credit up to \$1,500, depending on their years of service.	Funded in 2000, the credit was suspended in 2002, reinstated in 2003, and suspended again in 2004.
Mathematics Initiative for Teaching	Created in 1998 to address a shortage of credentialed mathematics teachers, the program provided funds for tuition, fees, and books. Recipients agreed to teach 1 year of mathematics for each \$2,500 received.	Funded at \$1.6 million in 1998, the program’s funding was significantly reduced in 2002-03 and was eliminated in 2003-04.
Teaching as a Priority (TAP) Block Grant Program	Created in 2000, TAP provided competitive block grants to districts for incentives to recruit and retain credentialed teachers to teach in low-performing schools. Incentives included signing bonuses, improved working conditions, teacher compensation, and housing subsidies.	Funding peaked in 2000-01, the first year of the program, at \$118.7 million. The program stopped receiving funding in 2003-04. In 2005-06, it was incorporated into the Professional Development Block Grant.

(Sources: Budget Act, 2005; California Center for Teaching Careers, 2003; California Commission on Teacher Credentialing [CCTC], 2003a; California Department of Education [CDE], 2003; California Student Aid Commission [CSAC], 2003; The Center for the Future of Teaching and Learning [CFTL], 2002; Franchise Tax Board, 2004; LAO, 2002, 2003a, 2003b.)

years of service, and the California Mathematics Initiative for Teaching (CMIT) awarded mathematics teachers up to \$7,500 over 3 years to repay student loans. These programs were short-lived, however. By 2004, all of these recruitment programs had been cut or suspended, leaving the Assumption Program of Loans for Education (APLE) as the primary financial incentive program for recruiting new teachers. APLE, a long-standing loan forgiveness program, is designed to encourage outstanding students to work in teacher shortage areas, including designated subjects and schools in the bottom half of the Academic Performance Index (API).

Teachers receive \$11,000 over 4 years of teaching and are eligible to be awarded an additional \$1,000 to \$3,000 for each year of teaching in a shortage field (mathematics, science, special education) and schools in the bottom two deciles of the API, for up to a total of \$19,000 in outstanding loan forgiveness. For 2006-07, the Governor approved 7,400 new APLE warrants and specified that an additional 600 APLE warrants will be dedicated in subsequent legislation to the Governor’s Science and Math Teacher Initiative (described under “Preparation of Teachers in Shortage Areas”). The 2006-07 budget includes an increase of \$6.8 million for additional APLE participants.

Recruitment Grants for Schools and Districts

In 2000, the state introduced the TAP Program, which provided competitive block grants to districts for incentives to recruit and retain credentialed teachers to teach in low-performing schools. Districts could use the funding for signing bonuses, improved working conditions, teacher compensation, and housing subsidies to attract teachers to schools in the bottom half of the API. TAP funding peaked during the first year of the program at \$119 million but was discontinued in 2003-04. In 2005-06, the program was incorporated into the new Professional Development Block Grant (see the section on “Professional Development”).

This year, the state budget again provides funding to recruit teachers to low-performing schools. The Low-Performing School Enrichment Block Grant will provide \$50 million in one-time funds to improve the recruitment and retention of both teachers and principals (see Exhibit 39). The funds are available only to schools in deciles 1 through 3 on the API and can be used in a variety of ways— for example, to improve school safety and cleanliness, provide support services for students and teachers, promote recruitment and retention of well-prepared and experienced teachers, allow time for teachers and principals to collaborate, and use differential pay to attract teachers.

The Low-Performing School Enrichment Block Grant complements provisions in the QEIA. Similar to the block grant, the QEIA targets schools ranked in the

bottom two deciles on the API. As described in Chapter 1, the QEIA is designed to improve working conditions, attract accomplished teachers to those schools, and boost student achievement. Schools that are accepted into the QEIA program will be able to use funds from the Low-Performing School Enrichment Block Grant to meet the demands of QEIA participation, particularly the need to attract additional teachers for reduced class sizes and the requirement to employ qualified and experienced principals.

Improving Hiring and Compensation Practices

In addition to providing additional resources for teacher recruitment and retention, the California legislature took steps to ensure that high-need schools have hiring and compensation policies in place that enable them to attract the most prepared and experienced teachers. As highlighted in *The Status of the Teaching Profession 2005* (Esch, Chang-Ross, Guha, Humphrey, Shields, et al., 2005), high-need schools can lose prospective teachers due to delays in the hiring process and voluntary transfer provisions in collective bargaining agreements that give priority to teachers with seniority. Legislation passed this year creates supports for districts to improve hiring and transfer practices, encourages incentive pay systems that recognize teachers for taking on challenging assignments, and allows principals in low-performing schools greater discretion over hiring (see Exhibit 39).

Exhibit 39
Key Initiatives to Improve Recruitment and Hiring

Related Legislation	Key Priorities
AB 1802 (Laird) <i>Education Finance</i>	<ul style="list-style-type: none"> Establishes a \$50 million Low-Performing School Enrichment Block Grant to be used for teacher recruitment and retention and to improve the educational culture and environment.
SB 1133 (Torlakson) <i>Quality Education Investment Act (QEIA)</i>	<ul style="list-style-type: none"> Provides \$2.9 billion to K-12 education over a 7-year period from 2007-08 to 2013-14. Allows schools ranked in deciles 1 and 2 on the 2005 API to apply to receive \$500/grade K-3 student, \$900/grade 4-8 student, and \$1,000/grade 9-12 student in order to reduce class size and improve working conditions.
SB 1209 (Scott) <i>Omnibus Teacher Workforce Bill</i>	<ul style="list-style-type: none"> Provides \$3 million for the development of Personnel Management Assistance Teams to improve district hiring practices. Enables districts and bargaining units to develop incentives and compensation schemes that reward teachers who take on challenging assignments, work in high-need schools, or improve student performance.
SB 1655 (Scott) <i>Voluntary Transfer</i>	<ul style="list-style-type: none"> Allows principals in low-performing schools to refuse teacher transfer requests. Ends priority for transfer requests made after April 15 over applications from other qualified teachers.

For example, beginning in 2006-07, school district administrators will have a new resource to improve personnel management and hiring policies. SB 1209 (Scott) includes \$3 million for the establishment of Personnel Management Assistance Teams (PMATs) in up to six county offices. Each PMAT will serve as a centralized location for support in teacher hiring and transfer practices, and one PMAT will be designated as the personnel management information clearinghouse for the entire state. As described in Chapter 2, certain inland regions of the state are likely to experience high teacher demand because of projected increases in student enrollment—PMATs in these regions could be especially beneficial. The legislation also includes a provision that allows districts and bargaining units to apply jointly for state funding to design teacher compensation packages that are based on criteria beyond years of training and experience, the two components of the traditional “step and column” salary schedule. These incentive pay systems can be designed to compensate teachers for the additional responsibilities, time, and effort required to serve in challenging settings and assignments; to recognize teachers for professional experience and growth in their assignments; and to reward teacher contributions to improved student achievement.

In a similar effort to improve teacher quality in low-performing schools, SB 1655 (Scott) gives principals more discretion in hiring by reducing the impacts of unwanted teacher transfers. The bill responds to a recent study by The New Teacher Project (Levin, Mulhern, & Schunck, 2005) that highlighted the problem of transfers of unsuccessful teachers from one school to another. Many bargaining agreements require principals at receiving schools to accept all transfers, regardless of the match between the teacher’s skill set and the needs of the school. To prevent this practice, SB 1655 allows principals of schools ranked in deciles 1 through 3 on the API to reject a voluntary transfer. The report also found that hard-to-staff schools lose promising teachers because of hiring delays that are a result of teacher transfer policies. Consequently, the bill prohibits school districts from giving priority to teachers who make transfer requests after April 15 (before the year the transfer would be effective) over other qualified applicants for an open position.

“In 2006, policy-makers made a variety of important modifications to the state’s teacher preparation system to streamline the preparation process and improve the quality of teacher preparation programs.”

TEACHER PREPARATION

California’s system of teacher preparation includes both traditional teacher preparation programs and teacher internship programs. Participation in these programs can provide an indication of the number of teachers that will be available in future years. As described in Chapter 2, enrollment in both traditional and intern teacher preparation programs has been declining after years of growth. With teacher retirements anticipated to grow, it is imperative that higher education institutions increase credential production. At the same time, the state’s high standards and greater accountability for student learning require teacher preparation programs to produce effective teachers with the skills and knowledge to teach an array of students.

In 2006, policymakers made a variety of important modifications to the state’s teacher preparation system to streamline the preparation process and improve the quality of teacher preparation programs (see Exhibit 42). SB 1209 (Scott) changes testing and assessment requirements for teacher candidates and provides funds to improve university and district intern programs. Other legislation increases support for the Paraprofessional Teacher Preparation Program and devotes resources to several initiatives to improve the preparation of teachers in hard-to-staff subjects and assignments. We describe these efforts in the next section.

Removing Barriers to Entry

To earn a preliminary credential, teacher candidates must pass a series of tests to demonstrate basic skills, subject-specific knowledge, and teaching ability (see Exhibit 40). SB 1209 streamlines credentialing by allowing alternatives to the California Basic Educational Skills Test (CBEST) and requiring a review of other assessments to ease entry into the profession. More specifically, SB 1209 removes duplicate skills testing for teachers who have already demonstrated basic skills as part of another assessment. Starting in 2007, teachers may substitute scores on other tests, such as the Graduate Record Examination (GRE), in lieu of taking the CBEST. Similarly, the legislation requires that the California Subject Examinations for Teachers (CSET) Multiple Subjects be modified to include assessment of writing skills similar to those tested in the CBEST. Once modified, successfully passing the CSET Multiple Subjects will be considered equivalent to passing the CBEST. The CCTC also will review the desirability of consolidating

Exhibit 40
Examinations Required to Earn a Preliminary Credential

Examination	Skills Tested
California Basic Educational Skills Test	<ul style="list-style-type: none"> • Basic reading, mathematics, and writing skills.
California Subject Examinations for Teachers	<ul style="list-style-type: none"> • Subject-specific subject-matter content knowledge. • Multiple subjects, single subjects, and preliminary educational technology.
Reading Instruction Competence Assessment	<ul style="list-style-type: none"> • Knowledge, skill, and ability to provide effective reading instruction (for multiple-subject and education specialist credentials only).
Teacher Performance Assessment	<ul style="list-style-type: none"> • Knowledge, skills, and abilities gained through teacher preparation.

items into the CSET Single Subject. The legislation has provisions for out-of-state teachers, allowing them to be exempted from taking the CBEST if they have successfully passed a similar test as part of their out-of-state credentialing or passed a skills test administered by the hiring district. SB 1209 also requires the CCTC to examine the modification or consolidation of additional tests in upcoming years, including the incorporation of the Reading Instruction Competence Assessment (RICA) into Teacher Performance Assessments (TPAs) by 2009, and the modification of the CSET to assess all basic skills without raising fees paid by teacher candidates.

Improving Traditional Teacher Preparation Programs

While SB 1209 removes barriers to entering the teaching profession, the legislation also builds on past efforts to improve the quality of teacher preparation. In 1998, SB 2042 (Alpert) established new and higher standards for teacher preparation programs, as well as a new two-tiered structure that introduced additional requirements for teachers pursuing a teaching credential. The new credentialing system requires all prospective teachers to pass a TPA to earn a preliminary credential. The TPA is based on the state’s Teacher Performance Expectations (TPEs), which mirror the California Standards for the Teaching Profession (CSTP). Teachers are required to perform authentic, performance-based tasks that measure a credential candidate’s knowledge, skills, and abilities with respect to the TPEs. The tasks require candidates to plan instruction that meets student needs, implement instructional planning, collect and analyze student work, and reflect on instruction and student achievement (CCTC, 2003b).

Teacher preparation programs can use the state-developed TPA or develop their own performance assessment.

Although the TPA was written into law as part of SB 2042, the legislation specifically stipulated that TPA implementation was required only if state funding was provided. Because institutions of higher education have never received a budget allocation to fund administration of the test, which is considered costly given the complexity of the assessment and the extensive training required for assessors, the TPA has been an inactive requirement. At the same time, preparation programs are still required under SB 2042 standards to assess candidates against the TPEs before recommending them for a preliminary credential. Therefore, despite the lack of state funding, many programs have moved ahead with the implementation of the TPA or a similar test. For example, a consortium comprising UC and a few private and CSU institutions has developed an alternative version of the assessment, known as the Performance Assessment for California Teachers or PACT (see Exhibit 41). SB 1209 reinforces the importance of the TPA by requiring all teacher preparation programs to include a TPA by July 1, 2008. The legislation strengthens the requirement that the TPA must be completed to earn a preliminary credential and expresses the intent of the legislature to provide full funding. Moving in this direction, the 2006-07 budget includes \$500,000 for the CCTC to implement the TPA.

Exhibit 41
Performance Assessment for California Teachers

PACT is a consortium of teacher-preparation programs that have joined together to develop a teacher performance assessment. PACT includes embedded assessments completed during the year and a capstone teaching event that measures the Teacher Performance Expectations. Currently, 16 institutions are participating:*

- | | | |
|----------------------------------|--|-------------------------------------|
| • Mills College | • Stanford University | • UC Riverside |
| • Sacramento State University | • University of California (UC) Berkeley | • UC San Diego |
| • San Diego City Schools | • UC Davis | • UC Santa Barbara |
| • San Diego State University | • UC Irvine | • UC Santa Cruz |
| • San Francisco State University | • UC Los Angeles | • University of Southern California |
| • San Jose State University | | |

**Institutions vary in their degree of participation.*

Whereas the TPA is a means to strengthen the quality of candidates completing teacher preparation programs, the programs themselves are coming under great scrutiny. A recent report suggests that teacher preparation programs nationwide are not adequately preparing teachers for the realities they face in today's classrooms and that problems lie in low admissions standards and a lack of quality control (Levine, 2006). One of the report's recommendations for strengthening program quality entails redesigning the process by which programs are accredited, including a greater focus on student achievement. In California, several efforts have been under way to reform the teacher preparation accreditation system. An Accreditation Study Work Group convened by the CCTC has made recommendations, which are being considered, that could have a significant impact on the state's system of teacher preparation. The recommendations include biennial data collection and reporting on the performance of teacher candidates. The Work Group places emphasis on regular data collection and data-driven decisionmaking as part of a system of greater program accountability tied to student achievement (CCTC, 2005a). In addition to the working group, the legislature is planning a review of accreditation and its link to data-driven assessments. The budget Supplemental Language adopted by the legislature's Budget Conference Committee stipulates that a joint Senate/Assembly Education Committee working group will be formed to study accreditation reform, significantly simplify the state's accreditation system, and focus on "annual reviews of measurable performance outcomes."

Improving Alternative Certification Programs

Although the majority of new teachers continue to be prepared through traditional teacher preparation programs, more than 8,000 teachers were enrolled in the state's intern programs in 2004-05 (CCTC, 2005b). In response to research conducted for the *Teaching and California's Future* initiative that indicates that interns disproportionately teach in the state's lowest performing and highest minority schools (Esch et al., 2005), SB 1209 provides resources to strengthen intern programs and to create a new mentoring program (see Exhibit 42). The legislation increases intern funding for districts from \$2,500 per intern up to \$3,500 per intern. The funds are to be used to reduce mentor-intern ratios, provide more preservice training on teaching English learners (ELs), and address the distribution of interns to ensure low-performing schools do not have more interns than the district average. SB 1209 adds \$6.8 million to the intern program, for a total program budget of \$31.7 million in 2006-07. To support interns, SB 1209 also establishes the Certificated Staff Mentoring (CSM) program, which provides \$6,000 per year to veteran teachers who agree to work in low-performing schools (schools in API deciles 1-3) for at least 5 years and to assist interns during their first years of teaching. The 2006-07 budget provides \$11.2 million to implement the CSM program.

Exhibit 42
Key Changes to Teacher Preparation

Related Legislation	Key Priorities
SB 1209 (Scott) <i>Omnibus Teacher Workforce Bill</i>	<p><i>Streamlines Credentialing</i></p> <ul style="list-style-type: none"> • Allows substitution of a passing score on the Graduate Record Examination (GRE), Scholastic Aptitude Test (SAT) Reasoning Test, or ACT Plus Writing tests in lieu of passing CBEST. • Requires modification of CSET to include assessment of writing skills, which will allow passing CSET in lieu of CBEST. • Accepts out-of-state EL credentials. • Requires CCTC to recommend modifications to expedite special education credentialing. • Requires CCTC to determine the feasibility of incorporating RICA into TPAs by 2009. • Requires that TPAs be included in all teacher preparation programs. <p><i>Supports Interns</i></p> <ul style="list-style-type: none"> • Increases the per teacher award from \$2,500 to \$3,500 for alternative certification programs that agree to evenly distribute interns in their district, maintain small mentor-intern ratios (5:1), and provide more EL training. • Establishes the Certificated Staff Mentoring program to award veteran teachers with \$6,000 for teaching in low-performing schools and mentoring interns during their first years of induction.

Like the state’s intern program, the Paraprofessional Teacher Training Program (PTTP) serves as a means to recruit and prepare prospective teachers by assisting paraprofessionals in becoming teachers. The CCTC allocates funds to local programs to defray costs of completing requirements for a preliminary credential. In the 2006-07 budget, PTTP has been allocated more than \$9 million, of which \$2.5 million is available to increase the rate per participant from \$3,000 to \$3,500 and to address participant waiting lists.

Preparation of Teachers in Shortage Areas

In 2006, policymakers also took steps to improve the preparation of teachers of specific student populations and subjects, including special education teachers, teachers of ELs, and science and mathematics teachers. For example, SB 1209 requires the CCTC to recommend processes for expediting and enhancing requirements for obtaining a specialist credential in special education. The 2006-07 budget appropriates \$200,000 for this purpose and stipulates that the CCTC provide recommendations for revising special education teacher preparation programs to include performance-based measures that ensure competence and remove redundancies in training. SB 1209 also places emphasis on teachers of ELs. The bill allows teachers with out-of-state EL credentials to qualify automatically for an EL teaching certificate in California.

In addition to efforts included in SB 1209, the 2006-07 budget appropriates an additional \$1.5 million to the UC and California State University (CSU) systems for the Governor’s Science and Math Teacher Initiative to increase the number of mathematics and science teachers trained. As part of the 2004 Higher Education Compact, UC and CSU committed to collaborating on the initiative to prepare more teachers in those subjects. In accepting these funds, UC has agreed to quadruple annual production of credentialed science and mathematics teachers from 250 per year to 1,000 per year, and CSU will double production from approximately 750 new mathematics and science teachers per year to 1,500 new teachers annually by 2010 (CSU, 2006a). To further address the ongoing shortage of credentialed science and mathematics teachers, the CSU system and the California Community Colleges (CCCs) recently agreed to collaborate to increase the number of credentialed science and mathematics teachers and to ensure alignment between CCC programs of study and subsequent university teacher preparation programs (CSU, 2006b). The state’s 109 community colleges enroll more than half of all freshmen college students, the majority of whom come from underrepresented minority groups, and are the largest source of transfer students for the 23 CSU campuses (CSU, 2006b).

TEACHER INDUCTION

California's teacher induction efforts have generally been recognized as one of the most significant investments in the support of new teachers of any state in the nation. The Beginning Teacher Support and Assessment (BTSA) program is designed to ease the transition into the teaching profession by supporting *fully* credentialed novice teachers with orientation programs, a mentor, formative assessments, and professional development.²³ The 2-year induction program, which is part of the state's strategy to improve the quality of teaching and reduce teacher attrition, is required for all teachers to earn a professional clear credential under the state's two-tiered credentialing system. Results from the TPA are used to craft individual learning plans for new teachers to follow during their induction period, and teachers are assessed through the California Formative Assessment and Support System for Teachers (CFASST), which also is aligned with the CSTP. The program was moved into a new Teacher Credentialing Block Grant in 2005, which changed the ways in which funds are distributed to BTSA programs by allocating funds through apportionments instead of grants.

In 2005-06, the BTSA program served approximately 25,300 first- and second-year teachers, up from 22,700 the year before (CDE, 2006f). Participation is expected to reach 27,900 teachers across 148 programs in 2006-07; the BTSA program received an additional \$9.6 million to fund increases in participation, bringing total funding to approximately \$103 million.

As is the case with many state programs, research on the effectiveness of BTSA has been limited. Consequently, SB 1209 allocates \$1 million in 2007 for the CCTC to review all BTSA programs (see Exhibit 43). The review will include recommendations to eliminate any duplicative activities among teacher credentialing requirements, induction programs, and professional development activities. CCTC must also review the BTSA Standards of Quality and Effectiveness and assess the program's formative assessment. A report with recommendations must be completed by December 2007, and revision of standards must be completed by July 2008.

PROFESSIONAL DEVELOPMENT

The state invested millions of dollars in teacher professional development programs during the economically prosperous years of the late 1990s. These programs were intended to provide the teacher workforce with ongoing training to meet both higher expectations for student achievement and the needs of a growing and more diverse student population. Federal funding through NCLB enhanced the professional development opportunities available to teachers. Together, state and federal programs have focused on improving teachers' content-specific knowledge through, for example, the California Subject Matter Projects (CSMP) and the California Mathematics and Science Partnership Program (CaMSP), and have provided training on state-

Exhibit 43 Key Changes to Teacher Induction

Related Legislation	Key Priorities
SB 1209 (Scott) <i>Omnibus Teacher Workforce Bill</i>	<ul style="list-style-type: none"> Requires funding for 2 full years of induction for all candidates, removing district fiscal disincentives for early completion. Revises the block grant funding formula for BTSA to funding based on the number of participants, with the amount per candidate adjusted annually for inflation. Requires CCTC to regularly review induction programs and to revise the Standards of Quality and Effectiveness for Professional Teacher Induction Programs by 2008. Allows teachers from other countries to complete an induction program instead of a fifth year of study to obtain a clear credential.

²³ Interns are not eligible for the program because they have not yet met the requirements for a preliminary credential.

adopted reading and mathematics curricula through the Mathematics and Reading Professional Development Program (AB 466) and Reading First.

Districts also receive large amounts of state and federal professional development funds that provide discretion to local recipients over how to spend the money. Funding for many of these professional development programs has remained fairly constant since 2003, when budgets were reduced dramatically in response to the weak state economy. Some of these programs include the state's Peer Assistance and Review (PAR) and the federal Teacher and Principal Training and Recruiting Fund. To provide districts with greater fiscal flexibility in the use of professional development funds, the state created a new Professional Development Block Grant in 2005. Established by AB 825, the new block grant includes funding formerly available for the Instructional Time and Staff Development Reform (ITSDR), TAP, and Intersegmental programs. SB 1209 also provides more local control over professional development. The legislation simplifies credential renewal by removing the requirement for teachers to complete 150 hours of professional development every 5 years. In removing this requirement, the legislation intends to eliminate bureaucratic hoops and allow schools and districts to develop their own cohesive, targeted professional development programs. Teachers are encouraged to participate in individualized or school- and district-sponsored professional development activities with no minimum hour requirements for credential renewal.

Funding for many of these professional development programs has remained fairly constant since 2003, when budgets were reduced dramatically in response to the weak state economy. For 2006-07, most programs received relatively small funding increases, mainly reflecting cost-of-living adjustments. Other changes to professional development programs in 2006-07 are due to funding enhancements to particular programs, an influx of one-time funds, and legislative actions. Exhibit 44 presents updates on a few key professional development programs.

In keeping with efforts to provide districts with greater control over the use of state funds, the 2006-07 budget includes a one-time Discretionary Block Grant. The grant has been allocated \$533.5 million, of which 75% is designated for school-site programs and the remaining 25% can be used for districtwide activities.

The budget specifies that the funds may be used for a variety of one-time investments, including professional development activities. Funds are allocated on a per pupil basis, and districts are guaranteed to receive a minimum of \$10,000.

Legislative action in 2006 also supported a variety of new professional development initiatives for teachers of ELs (see Exhibit 45). In addition to the existing Bilingual Teacher Training Program, the 2006-07 budget provides \$500,000 to be used for summer training and \$25 million for professional development of EL teachers; the latter has been added to the Mathematics and Reading Professional Development Program (AB 466). The budget further dedicates one-time funds in the amount of \$30 million for EL instructional materials, \$20 million for a pilot program to determine best practices in EL instruction for improving EL student achievement, and \$1.2 million for professional development of EL teachers to improve integration of standards-aligned instructional materials. Perhaps most significant from a financial standpoint, schools that teach significant numbers of EL students will receive an increase in funds this year because of changes in the Economic Impact Aid (EIA) formula. EIA targets funds to schools with disproportionate numbers of ELs and other disadvantaged students. Simplification and updating of the EIA formula resulted in a \$350 million increase, or roughly a 60% increase, in funding for these schools. Schools typically use these funds to support paraprofessionals, supplemental resource teachers, and EL advisory committees.

The state is also strengthening support for mathematics teachers. The budget allocates \$1.8 million in one-time funds for a new Mathematics Teacher Partnership Pilot Program to establish links between higher education and secondary-level mathematics programs. The program is intended to increase the supply of secondary mathematics teachers by encouraging upper-level college mathematics majors to enter the teaching profession in high-need districts. The program also aims to improve the capacity of existing high school mathematics teachers by providing them with high-quality professional development. County offices of education or consortia of county offices are eligible to apply for a grant. The program builds on existing efforts to improve the supply of well-prepared mathematics teachers, such as the Governor's Science and Math Teacher Initiative.

Exhibit 44
Updates on Key Professional Development Programs

Programs	Description	2005-06 Funding	2006-07 Funding	Change from 2005-06 to 2006-07
California Subject Matter Projects (CSMP)	CSMP provides content-rich subject-matter professional development in the following areas: mathematics, science, reading and literature, writing, physical education and health, history-social studies, international studies, foreign languages, and art.	\$9,350,000	\$9,350,000	No change
National Board Certification Incentive Program	The program provides districts with funds to award teachers who hold National Board certification and who teach in low-performing schools (API 1-5). A one-time incentive award of \$20,000 is paid in \$5,000 installments for 4 consecutive years.	\$7,535,000	\$7,535,000	No change
Professional Development Block Grant	The block grant includes ITSDR, TAP, and Intersegmental Staff Development.	\$259,321,000	\$264,081,000	\$4,760,000
Peer Assistance and Review	The program is designed to serve experienced teachers who would like to improve their skills or content knowledge.	\$27,318,000	\$28,935,000	\$1,617,000
Mathematics and Reading Professional Development	The program provides professional development and follow-up training for mathematics and reading teachers that are aligned with academic content standards. The program consists of 120 hours of professional development.	\$31,728,000	\$56,728,000	\$25,000,000
Bilingual Teacher Training Program	The program assists K-12 teachers who already possess a basic credential to attain authorizations to provide English Language Development (ELD), Specially Designed Academic Instruction in English (SDAIE), and primary language instructional services to ELs.	\$1,951,000	\$2,066,000	\$115,000
Reading First	This federally funded program supports increased professional development to ensure that all teachers have the skills they need to teach reading programs effectively.	\$151,924,000	\$143,837,000	(\$8,087,000)*
California Mathematics and Science Partnership Program (CaMSP)	Federally funded grants are awarded to eligible partnerships or educational agencies that in turn create opportunities for teachers to receive professional development in teaching mathematics and science.	\$24,278,000	\$25,821,000	\$1,543,000
Teacher and Principal Training and Recruiting Fund	Federal funds are distributed to states to increase students' academic achievement through the improvement of teacher and principal quality.	\$322,427,000	\$315,638,000	(\$6,789,000)

*Governor's veto removed \$15.1 million in carryover funds.

Exhibit 45
Key Changes to Professional Development

Related Legislation	Key Priorities
AB 1802 (Laird) <i>Budget Act, Education Trailer</i>	<ul style="list-style-type: none"> • Allocates \$533.5 million for a One-Time Discretionary Block Grant for a variety of purposes, including professional development and activities designed to close the achievement gap. • Allocates \$1.8 million for mathematics pilot program to increase the number and skills of mathematics teachers.
SB 1209 (Scott) <i>Omnibus Teacher Workforce Bill</i>	<ul style="list-style-type: none"> • Removes the requirement to complete 150 hours of professional development for credential renewal and encourages teachers to use greater discretion and to follow individualized development plans.
SB 472 (Alquist)	<ul style="list-style-type: none"> • Establishes professional development for teachers of ELs through the Mathematics and Reading Professional Development Program. • Allocates \$25 million.
SB 2117 (Coto)	<ul style="list-style-type: none"> • Requires a 3-year pilot project to determine best practices for EL instruction. • Allocates \$20 million.

CHAPTER SUMMARY

Overall, California policymakers have made significant efforts to strengthen the state’s teacher development system. The state has invested in initiatives designed to streamline entry into the profession, improve the skills and knowledge of new and experienced teachers, and help low-performing schools and districts attract effective teachers. By simplifying credentialing requirements and reducing barriers to entering the teaching profession, new legislation aims to increase the supply of teachers at a time when the state faces a surge in teacher retirement. The legislation also aims to improve the quality of the teacher workforce by reinforcing the importance of the TPA, ensuring that interns are supported by experienced teachers, and providing ongoing support for the state’s induction and professional development programs.

Moreover, the new initiatives and funds target subjects where teachers are in short supply and where assignments are challenging, such as mathematics, science, special education, and EL instruction. Finally, the state has targeted resources to the lowest performing schools and implemented policies to improve teacher hiring, transfer, and compensation policies to help ensure that the most prepared and experienced teachers teach in the schools that need them the most. It remains to be seen, however, whether these new policies and dollars will be sufficient to meet teacher quality and student achievement goals. In the next chapter, we highlight themes that emerge from the new policies and programs and assess the adequacy of the state’s efforts.

CONCLUSIONS

In response to the severe teacher shortages of the late 1990s, California policymakers took numerous steps to ensure that California classrooms were staffed with fully prepared teachers. In combination with federal requirements and a changing economy, these results appear to have paid off. The number of underprepared teachers has been reduced by more than half, and teachers working on emergency permits and waivers now number fewer than 10,000 for the first time since class-size reduction was introduced nearly a decade ago.

Nonetheless, the underprepared teachers who remain are concentrated in schools serving high proportions of minority students and the poorest and lowest achieving students. And, in spite of the progress made, California is unlikely to meet the NCLB requirements for highly qualified teachers. Most importantly, progress in student learning has been too slow. More than half of California school children still are not proficient in mathematics and reading/language arts. And the achievement gap between African-American and Latino students and their white and Asian peers has actually widened somewhat.

In the current favorable budget environment, state policymakers have put together a series of legislative and budgetary initiatives to address issues of teacher quality and student achievement. The state is making targeted investments to improve the conditions in the lowest performing schools in hopes of improving teacher quality. Steps have been taken to streamline credentialing requirements, to improve intern programs, and to begin to examine the effectiveness of teacher preparation programs more closely. The state's Beginning Teacher Support and Assessment program received an increase in support and will be reviewed to ensure its effectiveness. The new Certificated Staff Mentoring program now requires that all novice teachers, including interns, receive support during their first 2 years in the classroom. Most professional development programs have also received modest increases.

Teacher transfer policies have been modified to protect low-performing schools from teacher transfers that do not fit with staffing needs, and the state will begin the development of a data system to provide much needed information on the teacher workforce.

Across the array of programs and policies, several themes emerge from this year's efforts in Sacramento. First is equity, with the targeting of investments to the schools that need them most. Whether the investments are adequate to meet schools' needs is an open question, but the multibillion dollar shift of funds to the lowest performing schools may be the most important policy move in recent years.

Second is streamlining entry into the teaching profession. Policymakers took steps to simplify requirements in the credentialing, hiring, and professional development of teachers. Of special importance is an effort to give principals in the lowest performing schools, which often have the highest teacher turnover, greater flexibility in hiring new teachers.

Third is the continuation of the trend over the past few years toward local control. Following on last year's block granting, this year's legislation continues to give discretion to local districts and schools to decide how best to use resources. Whether all of the local districts and schools have the capacity to use the money well is unclear.

The final theme is data-based decisionmaking. Most important in this area is the state's support for the creation of a teacher data system. By consolidating information currently collected by numerous state agencies, the system can be used to analyze workforce trends, project future needs, evaluate the effectiveness of teacher development programs, and promote more efficient monitoring of teacher assignments. The development of a teacher data system is an important move toward crafting policy based on accurate information.

Have these 2006 education policymaking efforts been adequate? SB 1133 laudably targets billions to the neediest schools, but the funds are to be spent over 7 years and admittedly are sufficient to serve only a third of the schools eligible. SB 1209 seeks to get more fully prepared teachers into the schools that need them most, but it is not clear that the incentives will be sufficient to offset the numerous market factors that historically have made low-performing schools unattractive places to work.

Building a data system is common sense, but it will not begin to provide information to policymakers until the end of the decade. Over the next few years *Teaching and California's Future* will continue to track the implementation of these new initiatives and their impacts on California's teachers and students.

RECOMMENDATIONS

The Center for the Future of Teaching and Learning applauds the state’s policymakers for their efforts to improve the state’s teaching force. We believe the persistence of state and local education leaders and policymakers on this issue is an investment that will provide California with long-term dividends. We also believe that California policymakers need a fresh look at the quality of the teacher workforce that goes beyond the threshold of a credential. The Center for the Future of Teaching and Learning has begun a foundation-funded examination of teacher quality and will share our initial findings in 2007. We hope that the Governor, the legislature, and education leaders will continue to extend this year’s efforts to ensure that every California student is taught by an effective teacher.

We urge policymakers to:

Closely monitor and review the implementation of legislation enacted in 2006 designed to strengthen teacher preparation, recruitment, development, and retention.

- Identify any additional improvements and refinements needed in the state’s system of teacher development that will ensure that every child has a fully prepared, capable, and caring teacher.

Continue to build the capacity of California’s teacher workforce to provide for equity and student achievement.

- Include funding in the state budget to continue the Governor’s Block Grant, providing funds statewide to all school districts and giving priority to the preparation, recruitment, and retention of teachers willing to serve in special education classrooms and to provide intensive professional development to teachers who are assigned out of their subject-matter fields.
- Review patterns of decreasing enrollment in the state’s teacher preparation programs in light of the impending teacher retirement boom and, on the basis of this review, provide targeted incentives in the state budget for teacher preparation programs willing to expand their capacity to prepare teachers,

especially in shortage areas such as special education, mathematics, and science.

- Ensure adequate funding for institutions of higher education with teacher preparation programs to implement mandated teacher performance assessment requirements.
- Create a comprehensive program of grants and loans to prospective teachers to cover costs associated with tuition, materials, and living expenses by consolidating a recreated Governor’s Teaching Fellowship with a redesigned Assumption Program of Loans for Education, assigning highest priority for prospective and underprepared special education teachers.
- Eliminate remaining barriers for retired teachers willing to accept assignments in shortage areas for which they are fully prepared and/or to serve as mentors to novice teachers.
- Encourage the use of statewide demographic and teacher distribution data by the Regional Personnel Management Assistance Teams (Chapter 517, Statutes of 2006) to review personnel practices that facilitate the timely hiring and placement of prepared teachers for the 10 fastest growing counties in the state.
- Based on a review of the Superintendent of Public Instruction’s plan for providing technical assistance to public school employers and exclusive representatives of credentialed teachers for the design of innovative salary schedules for teachers as authorized by Chapter 517, Statutes of 2006 (SB 1209, Scott), provide support for selected local projects through the Budget Act.
- Appropriate funds in the state budget to continue development of the California Longitudinal Integrated Teacher Data System (CALTIDES) established by Chapter 840, Statutes of 2006 (SB 1614, Simitian) while adopting a long-term funding mechanism to ensure that the system can annually provide essential teacher workforce information to state and local policymakers.

Recognize that the economic health and well-being of the state requires a comprehensive approach to address the critical shortage of mathematics and science teachers. The comprehensive approach should build on the recommendations of the California Council on Science and Technology in *California's Response to Beyond the Gathering Storm* to address all aspects of the mathematics and science teacher development system, including recruitment, preparation, hiring, induction, and professional development.

- Strengthen the capacity of the existing workforce by targeting professional development to teachers assigned to mathematics and science classrooms who are not fully prepared for their assignments, and by encouraging the University of California and the California State University to provide comprehensive, content-based professional development for credentialed mathematics and

science teachers through the California Subject Matter Projects, specifically designed mathematics/science institutes, or other suitable means.

- Recognize the importance of the Memorandum of Understanding between the California Community Colleges and the California State University in creating a streamlined and strengthened pathway for aspiring teachers by extending these efforts to address articulation agreements between the two systems to support a pipeline for aspiring teachers of math and science.
- Create tax incentives for science- and technology-based businesses and industries willing to offer summer employment to teachers of science and mathematics, thereby offering these teachers year-round employment and opportunities for professional growth.

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SOURCE AND TECHNICAL INFORMATION FOR SELECTED EXHIBITS

CHAPTER 1. CONTEXT OF CALIFORNIA EDUCATION

Exhibit 7 – Percent of Fully Credentialed Experienced Teachers with EL Authorization, 1999-2000 to 2005-06. Data from the Professional Assignment and Information Form (PAIF) (1999-2000 through 2005-06) were used for this analysis. These data were obtained from the California Department of Education (CDE) California Basic Educational Data System (CBEDS) Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Only full-time teachers with more than 5 years of experience are included in this analysis. Teachers with English learner (EL) authorization are those who reported on CDE’s PAIF that they have English language development (ELD), Specially Designed Academic Instruction in English (SDAIE), and/or primary language (Bilingual, Crosscultural Language and Academic Development [BCLAD] or equivalent) certification.

CHAPTER 2. TEACHER SUPPLY, DEMAND, AND DISTRIBUTION

Exhibit 8 – Number of K-12 Teachers in the California Workforce, 1996-97 to 2005-06. The total teacher workforce number for 1996-97 was obtained from Historical Aggregate Data Files on the CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Data for 1997-98 to 2005-06 were obtained from the CDE’s DataQuest Web site at <http://dq.cde.ca.gov/dataquest/>.

Exhibit 9 – Number of Underprepared Teachers, 1997-98 to 2005-06. Data from the PAIF (1997-98 through 2005-06) were used for this analysis. These data were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life credential).

This definition of underprepared includes teachers holding intern credentials.

Exhibit 10 – Number of Underprepared Teachers by Credential Type, 1999-2000 to 2005-06. Data from the PAIF (1999-2000 through 2005-06) were used for this analysis. These data were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life credential). Teachers with “more than one underprepared credential type” are those teachers who reported holding a district or university intern credential and an emergency permit, pre-intern certificate, or waiver; these teachers cannot be placed in one of the other two categories. Teachers who did not report holding any type of credential, permit, or certificate are identified as “missing credential information.”

Exhibit 11 – Number of Novice Teachers by Credential Status, 2000-01 to 2005-06. Data from the PAIF (2000-01 through 2005-06) were used for this analysis. These data were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Only full-time teachers who reported that they had 0, 1, or 2 years of teaching experience are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life credential). Teachers who did not report holding any type of credential, permit, or certificate are not included in this analysis.

Exhibit 12 – Percent of Out-of-Field High School Teachers in Core Subjects, 2005-06. Three data files were merged to conduct this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) the Course Data by Assignment

(Assign05). These data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Only full-time teachers in California high schools have been included in this analysis. Teachers who indicated they are fully credentialed, but do not have subject-matter authorization in their assigned subject are defined as "out-of-field." Teachers were identified as being "assigned" to a subject if they reported on the PAIF that they taught at least one class in a core subject—English, mathematics, social science, physical science, or life science. Physical science assignments are limited to chemistry, physics, and physical science courses; life science assignments are limited to biology courses. Teachers with earth science, integrated/coordinated science, or other science assignments (e.g., astronomy, zoology, oceanography) are not included in the analysis. Teachers can have more than one assignment. For example, a teacher who teaches three periods of biology and two periods of English would have an English assignment and a life science assignment, both of which require the teacher to have the proper single-subject authorization. Data for 2005-06 cannot be compared with 2003-04 data in Exhibit 20 of the *California's Teaching Force 2004* report because of a change in methodology. (In previous years, only teachers who responded "Yes" to "Secondary/Subject-Specific Classroom" under Authorized Teaching Area[s] on the PAIF were included in the analysis; we did not make that restriction this year.)

Exhibit 13 – Percent Distribution of Schools by School-Level Percentage of Underprepared Teachers, 2005-06. Two data files were merged to conduct this analysis (1) the List of California Public Districts and Schools, and (2) the PAIF. These data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Underprepared teachers are teachers who responded on CDE's PAIF that they held a credential, permit, or certificate other than a "full credential" (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

Exhibit 14 – Top 10 California Counties by Number of Underprepared Teachers and Top 10 California Counties by Percentage of Underprepared Teachers, 2005-06. Data from DataQuest are presented in this exhibit. These data were obtained from the CDE's DataQuest Web site at <http://dq.cde.ca.gov/dataquest/>.

Exhibit 15 – Percent Distribution of Schools by School-Level Percentage of Novice Teachers, 2005-06. Two data files were merged to conduct this analysis (1) the List of California Public Districts and Schools, and (2) the PAIF. These data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF.

Exhibit 16 – Percent of Underprepared Teachers in Schools in the Highest and Lowest API Achievement Quartiles, 2000-01 to 2005-06. For each year presented in this exhibit, three data files were merged to conduct the analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) the Academic Performance Index (API) Growth data file. The List of California Public Districts and Schools and the PAIF data files were obtained from CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The API Growth data file was obtained from the CDE's Testing and Accountability Web site at <http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a "full credential" (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. The numbers of schools included in these analyses vary each year because (1) the number of open schools changes from year to year as schools open and close, and (2) the number of schools with complete data in all three files changes from year to year (see Exhibit A-1).

Exhibit A-1
Number of Schools by API Quartiles, for API Analyses

API Quartiles	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Highest achievement quartile	1,646	1,802	1,836	1,872	1,915	1,970
Third achievement quartile	1,661	1,816	1,841	1,887	1,901	2,016
Second achievement quartile	1,662	1,811	1,837	1,876	1,866	1,965
Lowest achievement quartile	1,657	1,829	1,815	1,887	1,880	2,025
Total	6,626	7,258	7,329	7,522	7,562	7,976

Exhibit 17 – Percent Probability of Having Had an Underprepared Teacher by API Achievement Quartiles.

Data from the following files were used in this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) the API Growth data file. The average percent of underprepared faculty calculated for Exhibit 16 is used for this analysis. The model assumes that students attend schools where the percent of underprepared faculty is equal to the average percent of underprepared faculty for each API category. This model also assumes that the probability of an underprepared teacher in any grade is equal to the average percent of underprepared faculty for schools in that particular API category. For example, if 23% of the teachers in schools in the lowest API category are underprepared in a given school year, there is a 23% probability that any teacher in any grade level in that school year is underprepared. The calculated probability of being taught by one underprepared teacher or more than one underprepared teacher applies only to sixth-grade students in 2005-06 who attended the same school from kindergarten to sixth grade.

Exhibit 18 – Percent of Underprepared and Novice Teachers by API Achievement Quartiles, 2005-06.

Three data files were merged to conduct this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) the API Growth data file. The List of California Public Districts and Schools and the PAIF data files were obtained from CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The API Growth data file was obtained from the CDE’s Testing and Accountability Web site at <http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF. Underprepared

teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. See Exhibit A-1 for the number of schools included in this analysis.

Exhibit 19 – Percent of Underprepared and Novice Teachers by School-Level Percentage of 10th-Grade Students Passing the CAHSEE, 2005-06.

Three data files were merged to conduct this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) the California High School Exit Exam (CAHSEE) Statewide Research File. The List of California Public Districts and Schools and the PAIF data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The CAHSEE Statewide Research File was obtained from the CDE’s CAHSEE Web site at <http://cahsee.cde.ca.gov/datafiles.asp>.

All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

Tenth-grade students were given one opportunity to take the CAHSEE. Students absent on the day of the examination were generally given a make-up test at a later date during the school year. To determine the total number of 10th-grade students who passed the English portion of the CAHSEE, the variable “combined administration” was used to capture students who took the examination on either the established test date or the make-up test date.

Exhibit A-2
Number of Schools by School-Level Minority, for Minority Analyses

Percent of nonwhite student populations	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Lowest minority quartile	1,829	1,859	1,900	1,939	2,006	1,864
Second minority quartile	1,832	1,866	1,902	1,947	2,000	1,864
Third minority quartile	1,833	1,852	1,898	1,938	2,007	1,865
Highest minority quartile	1,840	1,857	1,906	1,950	2,012	1,865
Total	7,334	7,452	7,606	7,774	8,025	7,458

To protect student privacy, the state gave all schools with 10 or fewer 10th-grade students taking the examination a value of “0” for the percent of students passing the English or the mathematics portion of the examination. Because this “0” did not mean that no students passed the English or mathematics portion of the CAHSEE, schools with 10 or fewer students in either English or mathematics are not included in the analysis.

Exhibit 20 – Percent of Underprepared Teachers in Schools with the Highest and Lowest Percentages of Minority Students, 2000-01 to 2005-06. For data for 2000-01 to 2004-05, three data files were merged to conduct the analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) the Enrollment by Ethnic Group and School aggregate data file. The List of California Public Districts and Schools and the PAIF data files were obtained from CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The Enrollment by Ethnic Group and School aggregate data file was obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>.

In 2005-06, the Enrollment by Ethnic Group and School aggregate data file was not released. The School Information Form (SIF) - Section B was used to calculate school-level percentage of minority students and merged with the List of California Public Districts and Schools and the PAIF. The SIF - Section B was obtained from CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>.

All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life

credential). This definition of underprepared includes teachers holding intern credentials or certificates.

The numbers of schools included in these analyses vary each year because (1) the number of open schools changes from year to year as schools open and close, (2) the number of schools with complete data in all three files changes from year to year, and (3) for 2005-06, we had to use a different data file to calculate percent minority, and many schools did not have complete data in this file (see Exhibit A-2).

Exhibit 21 – Percent of Underprepared and Novice Teachers by School-Level Percentage of Minority Students, 2005-06. Three data files were merged to conduct this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) SIF - Section B. The List of California Public Districts and Schools and the PAIF data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The SIF - Section B was obtained from CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. See Exhibit A-2 for the number of schools included in this analysis.

Exhibit 22 – Percent Distribution of Interns by School-Level Percentage of Minority Students, 2005-06. Three data files were merged to conduct this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) SIF - Section B. The List of California Public Districts and Schools and the

PAIF data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The SIF - Section B was obtained from CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. This analysis includes teachers who responded on the PAIF that they were a "university intern" or a "district intern." Only full-time teachers are included in this analysis.

Exhibit 23 – Percent of Underprepared Teachers by Type of Authorization, 1999-2000 to 2005-06. Data from the PAIF (1999-2000 through 2005-06) were used for this analysis. These data were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Only full-time teachers are included in this analysis. For each credential authorization—elementary, secondary, and special education—the percentage of underprepared teachers (those who reported on the PAIF that they held a credential, permit, or certificate other than a "full credential") is calculated as a proportion of full-time teachers. Teachers could report more than one type of credential authorization. Teachers who did not report holding any type of credential, permit, or certificate are not included in this analysis.

Exhibit 24 – Percent of Underprepared First- and Second-Year Teachers, 2004-05 and 2005-06. Data from the PAIF (2004-05 to 2005-06) were used for this analysis. These data were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Only full-time teachers who reported that they had 0, 1, or 2 years of teaching experience are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a "full credential" (e.g., preliminary, professional clear, life credential). Teachers who did not report holding any type of credential, permit, or certificate are not included in this analysis.

Exhibit 25 – Percent of Underprepared Special Education Teachers by School-level Percentage of Minority Students, 2004-05 and 2005-06. Three data files were merged to conduct this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) SIF -Section B. The List of California Public Districts and Schools and the PAIF data files

were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The SIF - Section B was obtained from CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared special education teachers are teachers who responded on the PAIF that they had a special education authorization and held a credential, permit, or certificate other than a "full credential" (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

Exhibit 26 – Percent of Underprepared Mathematics and Science Teachers, 2001-02 to 2005-06. Three data files were merged to conduct this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) the Course Data by Assignment (Assign05). These data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential other than a "full" credential (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being "assigned" to mathematics if they reported on the PAIF that they taught at least one mathematics course. Teachers were identified as being "assigned" to science if they reported on the PAIF that they taught at least one science course.

Exhibit 27 – Percent of Underprepared First- and Second-Year Mathematics and Science Teachers, 2001-02 to 2005-06. Three data files were merged to conduct this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, and (3) the Course Data by Assignment (Assign05). These data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who

responded on the PAIF that they held a credential other than a “full” credential (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being “assigned” to mathematics if they reported on the PAIF that they taught at least one mathematics course. Teachers were identified as being “assigned” to science if they reported on the PAIF that they taught at least one science course.

Exhibit 28 – Percent of Underprepared Mathematics and Science Teachers by Percentage of Minority Students in Middle and High Schools, 2001-02 to 2005-06.

Four data files were merged to conduct this analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, (3) the Course Data by Assignment (Assign05), and (4) SIF - Section B. The first three data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The fourth data file, SIF – Section B, was obtained from CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>. All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential other than a “full” credential (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being “assigned” to mathematics if they reported on the PAIF that they taught at least one mathematics course. Teachers were identified as being “assigned” to science if they reported on the PAIF that they taught at least one science course.

Exhibit 29 – Percent of Underprepared Mathematics and Science Teachers by Middle and High School API Quartiles, 2001-02 to 2005-06.

For each year presented in this exhibit, four data files were merged to conduct the analysis: (1) the List of California Public Districts and Schools, (2) the PAIF, (3) Course Data by Assignment (Assign05), and (4) the API Growth data file. The List of California Public Districts and Schools, the PAIF, and Assign05 data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The API Growth data file was obtained from the CDE’s Testing and Accountability Web site at <http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp>.

All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential other than a “full” credential (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being “assigned” to mathematics if they reported on the PAIF that they taught at least one mathematics course. Teachers were identified as being “assigned” to science if they reported on the PAIF that they taught at least one science course.

Exhibit 30 – Actual and Projected K-12 Public School Enrollment, 1990-91 to 2014-15. Data from the California Department of Finance (CDOF) 2005 Series: California K-12 Public Enrollment and High School Graduates are presented in this exhibit. The 2005 Series was obtained from the CDOF Web site at <http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/ReportsPapers.asp#projections>.

Exhibit 31 – Projected K-12 Public School Enrollment Change by County, 2004 to 2014.

Data from the CDOF 2005 Series: California K-12 Public Enrollment and High School Graduates are presented in this exhibit. The 2005 Series was obtained from the CDOF Web site at <http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/ReportsPapers.asp#projections>.

Exhibit 32 – Number of California State Teachers’ Retirement System (CalSTRS) Membership Retirements, 1995-96 to 2004-05.

Data from the CalSTRS 2005 Comprehensive Annual Financial Report are presented in this exhibit. The 2005 report was obtained from the CalSTRS Web site at http://www.calstrs.com/Help/forms_publications/printed/CurrentCAFR/CAFR05all.pdf.

Exhibit 33 – Age Distribution of K-12 Public School Teachers, 2005-06. Data from the California Basic Educational Data System’s PAIF are presented in this exhibit. These data were obtained by special request from the CDE.

Exhibit 34 – Number of Enrollees in Teacher Preparation Programs, 2000-01 to 2003-04. Data from the California Commission on Teacher Credentialing’s (CCTC) Teacher Supply in California: 2004-05 report are presented in this exhibit. These data were obtained from the CCTC’s Web site at http://www.ctc.ca.gov/reports/TS_2004_2005.pdf.

Exhibit 35 – Number of New University and District Intern Credentials Issued, 1995-96 to 2004-05. Data from the CCTC are presented in this exhibit. Data for 1995-96 through 1998-99 were obtained from the CCTC by special request. Data for 1999-2000 through 2004-05 were obtained from the CCTC’s annual Teacher Supply in California reports at <http://www.ctc.ca.gov/reports/leg-reports-archive.html>.

Exhibit 36 – Number of New Preliminary Teaching Credentials Issued, 1997-98 to 2004-05. Data from the CCTC are presented in this exhibit. Data for 1997-98 through 1998-99 were obtained from the CCTC by special request. Data for 1999-2000 through 2004-05 were obtained from the CCTC’s annual Teacher Supply in California reports at <http://www.ctc.ca.gov/reports/leg-reports-archive.html>.

“New preliminary credentials” include first-time, new-type preliminary or professional clear credentials. (First-time, new-type professional clear credentials typically represent a newly credentialed teacher, not an experienced veteran earning a Level II credential.) Intern credentials are not included in this exhibit.

Exhibit 37 – Number of California Credentials Issued to Teachers Trained Out of State, 1999-00 to 2004-05. Data from the CCTC are presented in this exhibit. These data were obtained from the CCTC’s annual Teacher Supply in California reports at <http://www.ctc.ca.gov/reports/leg-reports-archive.html>.

APPENDIX B

NCLB COMPLIANT AND NONCOMPLIANT CALIFORNIA CREDENTIALS

Exhibit B-1
NCLB-Compliant Authorizations for Underprepared Teachers

Route	Key Features	Status/Numbers
University Intern Credential	<ul style="list-style-type: none"> For enrollees of university-based teacher education programs Prerequisite: subject-matter competency Valid for 2 years, renewable for 1 additional year 	After several years of growth, dropped to 4,486 in 2004-05, a 1-year decline of 28%
District Intern Credential	<ul style="list-style-type: none"> For enrollees of district-based teacher education programs Prerequisites: BA, subject-matter competency Most commonly found in large, hard-to-staff districts Valid for 2 years, renewable for 1 additional year 	Flat from 1998-99 to 2003-04 (around 900 per year). Dropped to 746 in 2004-05, a 1-year decline of 15%
Early Completion Internship	<ul style="list-style-type: none"> Option of bypassing teacher education coursework by passing the Foundations of Teaching assessment Required completion of Teacher Performance Assessment, BA, and subject-matter tests Valid for 2 years 	In 2005-06, 154 individuals passed the Foundations of Teaching assessment. Of the 154, 111 passed the multiple-subjects test, 24 passed the single-subject English test, and 24 passed the single-subject mathematics test.

Sources: Information about Key Features was obtained from the California Commission on Teacher Credentialing (CCTC) Web site: <http://www.ctc.ca.gov>. Status and numbers for the university and district intern credentials come from the CCTC report, *Teacher Supply in California: A Report to the Legislature 2004-05* (see http://www.ctc.ca.gov/reports/TS_2004_2005.pdf). Status and numbers for the Early Completion Internship were obtained by special request from the CCTC.

Exhibit B-2
NCLB Noncompliant Authorizations for Underprepared Teachers

Route	Key Features	Status/Numbers
Emergency Permit	<ul style="list-style-type: none"> • Teachers have not demonstrated subject-matter competency • Teachers may or may not be enrolled in teacher preparation courses • Renewable annually, maximum of four renewals until 2006 	Numbers declining since 1999-2000. 7,766 issued in 2004-05, a 1-year decline of 24%. CCTC was phasing out the permits by June 30, 2006
Special Temporary Certificate	<ul style="list-style-type: none"> • Replaces Individualized Internship Certificates, which have been voided • Allows individuals who have completed subject-matter programs to enroll in college or university based teacher preparation programs while earning a credential • Issued for 2 years and is not renewable • Requires a BA and passage of CBEST 	Has fluctuated yearly since first issued in 2002-03. 1,658 issued in 2004-05, a 1-year decline of 37%
Pre-internship	<ul style="list-style-type: none"> • Teachers have not demonstrated subject-matter competency • Teachers participate in a program designed to help them pass subject-matter tests and enroll in an internship program • Only existing participants can renew; this option is no longer available to new applicants 	Has declined since 2002-03. 319 issued in 2004-05, a 1-year decline of 91%
Waiver	<ul style="list-style-type: none"> • Teachers have not demonstrated subject-matter competency • One or more basic requirements have been waived • Holder must demonstrate progress toward a credential • Valid for 1 year, renewable on a case-by-case basis and subject to certain conditions, with usually no more than two renewals 	Declined steadily between 1999-2000 and 2003-04 to 450. 475 issued in 2004-05, a 1-year increase of 4%
Provisional Internship Permit	<ul style="list-style-type: none"> • Created in response to the phasing out of emergency permits. Used for anticipated hires when a credentialed teacher cannot be found • Teachers have not demonstrated subject-matter competency • Requires a BA and 40 units in subject matter for a multiple-subject permit or 18 units for a single-subject permit • The district must provide a mentor and supervision, and sign an agreement with the applicant that outlines steps for completing subject-matter requirements/enrollment in an intern program • Renewable annually for a maximum of 2 years 	392 issued in 2004-05
Short-term Staff Permit	<ul style="list-style-type: none"> • Created in response to the phasing out of emergency permits. Applies to unanticipated hires • Requires a BA and 40 units in subject matter for a multiple-subject permit or 18 units for a single-subject permit • Valid for 1 year, nonrenewable 	278 issued in 2004-05

Sources: Information about Key Features was obtained from the CCTC Web site: <http://www.ctc.ca.gov/>. Status and numbers for emergency permits, special temporary certificates, pre-internships, and waivers come from the CCTC report, *Teacher Supply in California: A Report to the Legislature 2004-05* (see http://www.ctc.ca.gov/reports/TS_2004_2005.pdf). Status and numbers for the Provisional Internship Permit and Short-term Staff Permit were obtained by special request from the CCTC.