

The Status of the Teaching Profession

2005 FULL REPORT

Teaching and
California's
Future

California State University, Office
of the Chancellor

Policy Analysis for California Education

University of California, Office of
the President

WestEd

**Research conducted by SRI
International**

Teaching and California's Future is sponsored by The Center for the Future of Teaching and Learning. The Center is made up of education professionals, scholars and public policy experts who care deeply about improving the schooling of California's children. The Center was founded in 1995 as a public, nonprofit organization with the purpose of strengthening the capacity of California's teachers for delivering rigorous, well-rounded curriculum and ensuring the continuing intellectual, ethical and social development of all children.

This report was produced by The Center for the Future of Teaching and Learning in consultation with our co-sponsors — California State University, Office of the Chancellor; Policy Analysis for California Education; University of California, Office of the President; and WestEd.

Research was conducted by SRI International of Menlo Park, CA, which had primary responsibility for writing this report.

Funding for this initiative was generously provided by:

- Clarence E. Heller Charitable Foundation
- The William and Flora Hewlett Foundation
- The James Irvine Foundation
- Stuart Foundation
- Washington Mutual

Design by KSA-Plus Communications of Arlington, VA.

Promotion by Stone's Throw Communications of Manhattan Beach, CA.

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Full Report

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and

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Suggested citation:

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

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Acknowledgements

The SRI research team included the following people: Christopher M. Chang-Ross, Camille E. Esch, Roneeta Guha, Heather Hough, Paul Hu, Daniel C. Humphrey, Alejandra Lopez-Torkos, Patrick M. Shields, Juliet D. Tiffany-Morales, Marjorie E. Wechsler, and Katrina R. Woodworth. Editing and production support were provided by Meredith Ittner and Deborah DuCharme.

We would like to thank Steve Burke, Hal Javitz, Julie Koppich, Michael McKibbin, and staff at the California Department of Education for their assistance.

In addition, we would like to extend our appreciation to the district administrators, principals, and teachers in our case study districts for their participation in the study; and the Teaching and California's Future Cosponsors, Task Force Members, and Advisors for their insights and suggestions throughout the development of this report.

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Executive Summary

For over a decade, Californians have had to face the stark contradiction of being both the nation's technological and economic powerhouse and a laggard in educational achievement. Graduation rates and test scores on state and national examinations point to continued problems with educational quality and equity, particularly among its historically underserved poor and minority student populations. For example:

- Results from the National Assessment of Educational Progress (NAEP) indicated that only 22% of California fourth-graders and 21% of eighth-graders scored at or above the proficient level in reading; comparable figures for mathematics were 28% for fourth-graders and 22% for eighth-graders (National Center for Education Statistics [NCES], 2005).
- The state's 2002 high school graduation rate stands at 71%. Graduation rates for minority students trail behind: 57% for African-Americans and 60% for Latinos (The Civil Rights Project, 2005; Swanson, 2005).
- Only 19% of African-American students and 16% of Latino students in the graduating class of 2003 were eligible for admission to campuses of the California State University, compared with 34% of white students and 48% of Asian-American students (California Postsecondary Education Commission [CPEC], 2005).

Policymakers have been cognizant that this education stagnation jeopardizes future economic growth and have taken action to address it. Since the mid-1990s, the state has lowered class sizes in the primary grades, established standards across the curriculum, and initiated a standards-based assessment and accountability system. For a time, policymakers also focused on increasing investments in the teacher workforce. Especially when state coffers were flush in 2000 and 2001, additional dollars were targeted for teacher preparation, recruitment, and professional development. The results of these investments in the teacher workforce were clear. California made substantial progress in improving the qualifications of its teachers, by reducing the number of teachers without full credentials by half, for example.

Today, the accountability system established in the 1990s remains firmly in place. In fact, with the development of new standards tests, the addition of the California High School Exit Examination (CAHSEE), and the omnipresence of No Child Left Behind (NCLB), standards and accountability have become the state's single most powerful policy force in education. Teacher development programs, in contrast, have experienced setbacks. Budget cuts have drastically reduced the operating funds for many teacher development programs and some have been eliminated altogether.

Looking ahead, this lack of investment may prove disastrous. Absent any substantive policy interventions, severe teacher shortages are predicted to return as a wave of baby-boomers retire from the workforce over the next decade. These retirements will aggravate existing shortages in certain subject areas, and bring back the extreme disparities in teacher qualifications

across schools serving different types of students. Even today, with the most well-prepared teacher workforce since the implementation of class size reduction, inequities persist in the distribution of fully credentialed teachers. Affluent, white, and high-performing students typically have access to the most prepared teachers, while poor, minority, and low-performing students continue to be taught by the least prepared teachers. Likewise, special education students and English-language learners are more likely to have teachers who are not adequately prepared to teach them. These unfair conditions demand renewed attention and action, and are the primary focus of this report.

Teaching and California's Future

As policymakers have struggled to make informed decisions about effective ways of strengthening the state's teacher workforce, the Center for the Future of Teaching and Learning's *Teaching and California's Future* initiative (TCF) has provided California policymakers with objective and timely data. The TCF initiative publishes a report each year that provides detailed data on the teacher workforce and labor market and describes teacher development policies, with a focus on how they impact teacher quality and teacher distribution.

During the 2004-05 school year, SRI International, an independent research firm, launched a fourth comprehensive round of data collection. We conducted analyses of statewide teacher data to follow trends in teacher distribution over time and to document changes in California's teacher development policies and programs. We also collected original data in four teacher labor markets, visiting multiple districts in the same geographical region that draw on a common pool of teachers. In a total of 10 districts, we interviewed district officials, school administrators, and other school site leaders to determine how access to and use of available labor market data, formal policies (e.g., collective bargaining agreements, salary schedules), and practices (e.g., working conditions, instructional support) affect the hiring, distribution, and assignment of teachers at both the district and school levels. In addition, we interviewed teachers to learn how they chose their district and school and received their teaching assignments, and what kind of instructional supports are available to them. We also examined key contextual factors in each site, including local responses to the *Williams* settlement and the impact of NCLB on hiring and assignment practices. Lastly, we reviewed collective bargaining agreements (from the 10 case study districts and 7 of the 10 largest districts in the state) and interviewed union leaders in the case study districts to understand transfer and assignment policies. The findings from these data collection efforts are the basis for this report, summarized below.

Teacher Supply and Demand

California's teacher workforce is the largest in the country, with over 300,000 teachers serving a student population of over 6 million. In recent years, California has begun to recover from the acute teacher shortages of the late 1990s. Still, the state is far from ensuring that every

student has a qualified teacher, and predictions about the future capacity of the workforce are bleak.

- In 2004-05, California came closer to meeting its need for fully credentialed teachers than any time since the first year of class size reduction implementation in 1996-97. The gap has not been completely closed, however. More than 20,000 teachers are still “underprepared,” meaning they do not hold a full credential to teach.
- The demand for fully credentialed teachers is expected to grow through 2014-15. Trends in teacher supply sources do not indicate that there will be enough fully credentialed teachers to meet demand. Instead, the state will again need to employ high numbers of underprepared teachers—nearly 33,000 by the mid-2010s. This widening gap between supply and demand is primarily a result of increasing teacher retirements and decreasing production of new credentials.
- In 2004-05, California employed over 51,000 teachers who were over the age of 55 and over 97,000 teachers over the age of 50. If all these teachers retired at the average teacher retirement age of 61 over the next 10 to 11 years, the state would have to replace 97,000 teachers, or 32% of the present-day teacher workforce. Retirements are projected to peak in 2008-09 with approximately 4.8%, or about 15,000 teachers, of the workforce leaving in that year due to retirement alone.
- A decline in credential production is projected because teacher preparation programs have experienced 2 years of declining enrollment. From 2001-02 to 2002-03, enrollment in teacher preparation programs declined 4% (from approximately 76,000 to 73,000) and from 2002-03 to 2003-04, it dropped another 8% (from approximately 73,000 to 67,500).

Though the state has made progress in improving the qualifications of the overall workforce, all signs point to resurgent teacher shortages in future years. Furthermore, the state’s system of teacher development appears ill-prepared to manage the problem. In the previous decade there were more resources in place to recruit, prepare, place, and develop large numbers of teachers; now, the state’s investment in the teacher workforce has been substantially reduced.

Filling the Gap Between Teacher Supply and Demand

For over a decade, policy, economic, and demographic factors have conspired to create a gap between the number of fully credentialed teachers needed and the number of fully credentialed teachers available and willing to take jobs. This gap is filled with teachers who have not met the state’s minimum qualifications to teach, referred to here as “underprepared” teachers.

- During the late 1990s and early 2000s, the number of teachers who were not fully credentialed increased dramatically, reaching a high point of over 42,000 in 2000-01. Since that time, the number of underprepared teachers has steadily dropped to around 20,000 in 2004-05, about 7% of the total teacher workforce.

- The proportion of non-NCLB-compliant authorizations (e.g. emergency permits, waivers) held by underprepared teachers has shown a steady decline in recent years, from 83% of underprepared teachers in 2000-01 to 48% in 2004-05. There are still approximately 10,000 teachers holding emergency permits and other non-NCLB-compliant authorizations.
- The number of university intern credentials issued jumped from approximately 3,700 to about 6,200 between 2001-02 and 2003-04, an increase of 64%.

Certain subject areas, including math, science, and special education continue to be especially hard to staff. Districts hire disproportionate numbers of underprepared teachers in these subject areas.

- At the secondary level, between 10% and 13% of teachers in math and the sciences were underprepared in 2004-05.
- Fourteen percent of all special education teachers were underprepared. Among *first-year* special education teachers, nearly half (49%) were underprepared.

For any one teacher, the credential held offers an incomplete picture of individual qualifications to teach. Tracking these credentials at the aggregate level, however, gives an indication of the overall health of the workforce relative to other years and points to understaffed subject areas. The data above show that overall, the shortage of teachers is reduced but not gone, and in certain subject areas is still problematic.

Inadequate Preparation for Specific Teaching Assignments

Even when policymakers and practitioners succeed in getting fully credentialed teachers into classrooms, many challenges remain. Ideally, all teachers should be properly trained in the subject area they teach, have an assignment that is appropriate to their skill level and experience, and be prepared to teach English learners (ELs) if they have them in their classrooms. Often, however, this is not the case.

- In California, teachers with one or more ELs in their classrooms must have the proper authorization and training to teach them. Most teachers (87%) report having ELs in their classrooms, yet in 2004-05, fewer than half (48%) of all fully credentialed veteran teachers (with more than 5 years of teaching experience) had an EL authorization. Some case study districts have been slow to move all veteran teachers into compliance.
- “Out-of-field” teachers are those who hold a full credential in one subject area, but do not have the proper credential for at least one of the other subjects they are teaching. Out-of-field teaching is primarily an issue at the secondary level and appears to result largely from scheduling problems and districts’ attempts to find economy-based staffing solutions.

- Though most schools have relatively few out-of-field teachers, the number of students affected across the state is quite significant. In math, 12% of high school teachers are out of field, affecting approximately 91,000 students. In English, 15% of teachers are out of field, affecting a total of 149,000 students.
- Recently, the *Williams v. California* settlement has focused increased attention on teacher certifications and has led to some changes in the state's process of monitoring and reporting on whether teachers hold EL authorizations and are properly authorized for all subject areas they teach.
- The practice of giving challenging assignments to new teachers is widespread, including multiple preparations, large class sizes, students with significant academic or behavioral challenges, or only introductory or remedial classes. Case study data indicate that secondary schools struggle more with inappropriate assignments than elementary schools.
- A number of factors contribute to inappropriate assignments, including school culture and leadership, and in some cases, bargaining agreement provisions and other factors that delay hiring.

These issues demonstrate that providing every student with the teacher he or she needs will require more than simply meeting credentialing requirements or the provisions of NCLB.

The Distribution of Teachers Across California's Schools

Underprepared teachers are distributed unevenly throughout the state. California's lowest-performing schools—those where highly qualified and experienced teachers are most needed—continue to have the least prepared teaching staffs. Similarly, schools that serve the highest proportion of poor and minority students and English-language learners struggle more with attracting and retaining fully prepared teachers.

- Six percent of schools (about 500) have at least 20% underprepared teachers, and 19% of schools have at least 20% novice teachers.
- Low-performing schools tend to have higher proportions of underprepared and/or novice teachers than high-performing schools. In 2004-05, one out of every five teachers (21%) in the lowest achieving schools were underprepared and/or novice, compared to only 1 in 10 teachers (11%) in the highest achieving schools.
- Schools serving high proportions of minority students are also more likely to have more dense concentrations of underprepared and novice teachers. In 2004-05, schools serving 91 to 100% minority students had an average of 20% underprepared and/or novice teachers. Schools serving few or no minority students had an average of 11% underprepared and/or novice teachers.
- Like all underprepared teachers, interns are more concentrated in high-minority schools. Over half (53%) of all interns are teaching in schools with 91 to 100% minority students, compared with only 3% of interns in schools with the lowest minority student population.

- Finding teachers in shortage subject areas is a particular problem for high-need schools. In 2004-05, 22% of special education teachers in high-minority schools were underprepared, compared with 6% in schools serving few minority students. As a group, high-minority schools also have four times as many underprepared math and science teachers as low-minority schools.

Several factors contribute to the maldistribution of California's teachers:

- Teachers tend to be most attracted to familiar environments—in many cases suburban areas. Urban and rural schools face greater recruitment challenges, and often must “import” teachers from outside their communities.
- Many of the extra resources that high-need districts had for addressing their recruitment problems, such as Teaching as a Priority (TAP) grants, have been chipped away in recent years.
- Good working conditions, including support for new teachers, are critical for attracting and retaining teachers in high-need schools. In some cases, high salaries may mitigate the effects of poor working conditions, but only to a degree.
- High-need schools may lose prospective teachers when hiring is delayed due to insufficient budget and enrollment data, or time spent processing internal transfers.
- Some collective bargaining agreements have provisions regarding teacher transfers that may unintentionally contribute to within-district maldistribution. Districts have few levers to correct an imbalance in staffing once it has occurred.

The maldistribution of underprepared teachers in California has lessened over time, but the problem persists. Many of the underlying causes of the maldistribution have never been adequately addressed by state or local policies. Given the projections that teacher shortages will return in force in future years, the problem may well worsen over time. Historical data show that when fully credentialed teachers are in short supply, low-performing, minority, and poor students are the ones who get shortchanged.

Recommendations

Though daunting, the challenges described in this report need to be addressed now. The pressure to improve student achievement has never been greater, and any successful approach to the problem will unquestionably require attention to the state's teacher workforce. This point in time marks an opportunity for California: the state is recovering from the acute teacher shortages of recent years and has a brief reprieve before a boom in retirements leads to a likely return of widespread teacher shortages and aggravates the existing maldistribution. Clearly, this is the time for decisive and courageous action in pursuit of a highly skilled teacher for every child in California. The Center for the Future of Teaching and Learning recommends the legislature and governor take the following actions:

- Ensure that all teachers who enter the classroom have a thorough knowledge of the subject matter assigned and possess the pedagogical skill required to teach all children.
- Ensure that all students have equitable access to teachers who are fully prepared, experienced, and appropriately assigned.
- Ensure that policymakers have a data system that allows adequate monitoring of state efforts to provide equitable access to fully prepared and experienced teachers.

1. Introduction

For over a decade, Californians have had to face the stark contradiction of being both the nation's technological and economic powerhouse and a laggard in educational achievement. Graduation rates and test scores on state and national examinations point to continued problems with educational quality and equity, particularly among its historically underserved poor and minority student populations. The following data indicate the scope and severity of the problems confronting the state's teachers and policymakers:

- In 2005, well under half of California's students scored at the proficient or advanced levels in English/language arts (40%) or in mathematics (38%) on the California Standards Test (CST). Among minority students, achievement was substantially lower. For example, 28% of African-American fifth-graders and 32% of Latino fifth-graders scored at or above the proficient level in math, compared with 44% of all fifth-grade students (California Department of Education [CDE], 2005a, 2005o).
- Results from the National Assessment of Educational Progress (NAEP) indicated that only 22% of California fourth-graders and 21% of eighth-graders scored at or above the proficient level in reading; comparable figures for mathematics were 28% for fourth-graders and 22% for eighth-graders (National Center for Education Statistics [NCES], 2005).
- By the eleventh grade, only 75% and 82% of African-Americans passed the mathematics and English/language arts portions of the California High School Exit Exam (CAHSEE), respectively. For Latino students, the pass rates were 81% for mathematics and 81% in English/language arts (CDE, 2005b).
- Special education students passed at even lower rates; only 51% passed the mathematics portion of the test, and 54% passed the English/language arts portion (CDE, 2005b).
- The state's 2002 high school graduation rate stands at 71%. Graduation rates for minority students trail behind: 57% for African-Americans and 60% for Latinos (The Civil Rights Project, 2005; Swanson, 2005).
- Only 19% of African-American students and 16% of Latino students in the graduating class of 2003 were eligible for admission to campuses of the California State University, compared with 34% of white students and 48% of Asian-American students (California Postsecondary Education Commission [CPEC], 2005).

Policymakers have been cognizant that this education stagnation jeopardizes future economic growth. Since the mid-1990s, the state has lowered class sizes in the primary grades, established standards across the curriculum, and initiated a standards-based assessment and accountability system.

Policymakers also have focused on strengthening the teacher workforce—responding to both popular consensus as well as research showing that teachers are the most important determinant of student learning outside the home (see, for example, Hanushek, 1992; Rivkin,

Hanushek, & Kain, 1998; Rockoff, 2004; Sanders & Rivers, 1996). Especially when state coffers were flush in 2000 and 2001, additional dollars were targeted for teacher preparation, recruitment, and professional development.

Results of these efforts are clear. California has made substantial progress in improving the qualifications of its teachers. The state has reduced the number of teachers without full credentials by half, for example. Yet, inequities persist in the distribution of fully credentialed teachers. Affluent, white, and high-performing students typically have access to the most prepared teachers, while poor, minority, and low-performing students continue to be taught by novices and teachers without full credentials. Likewise, special education students and English-language learners are more likely to have teachers who are not adequately prepared to teach them. At the secondary level, out-of-field teaching in core subject areas continues to be a major problem.

Teaching and California's Future

As policymakers have struggled to make informed decisions about effective ways of strengthening the state's teacher workforce, the *Teaching and California's Future* initiative (TCF) has provided California policymakers with objective and timely data. Housed at the Center for the Future of Teaching and Learning, TCF is an independent initiative driven by 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 the continuing professional development to ensure that he or she stays current in his or her field.

The TCF initiative publishes a report each year that provides detailed data on the teacher workforce and labor market and describes teacher development policies, with a focus on how they impact teacher quality and teacher distribution.¹

Data Collection

Data for the current report is based on two related data collection efforts. SRI International, an independent research firm, conducted analyses of statewide teacher data to follow trends in teacher distribution over time and to document changes in California's teacher development

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

policies and programs. During the 2004-05 school year, we also collected original data to understand local policies and decisions that impact teacher distribution and assignment. We conducted case studies in four teacher labor markets, visiting multiple districts in the same geographical region that draw on a common pool of teachers. In a total of 10 districts, we interviewed district officials, school administrators, and other school site leaders to determine how access to and use of available labor market data, formal policies (e.g., collective bargaining agreements, salary schedules), and practices (e.g., working conditions, instructional support) affect the hiring, distribution, and assignment of teachers at both the district and school levels. In addition, we interviewed teachers to learn how they chose their district and school and received their teaching assignments, and what kind of instructional supports are available to them. We also examined key contextual factors in each site, including local responses to the *Williams* settlement and the impact of No Child Left Behind (NCLB) on hiring and assignment practices. Lastly, we reviewed collective bargaining agreements (from the 10 case study districts and 7 of the 10 largest districts in the state) and interviewed union leaders in the case study districts to understand transfer and assignment policies. The findings from these data collection efforts are the basis for this report.

Organization of the Report

Organized into an additional six chapters, this document includes the main research findings of *Teaching and California's Future 2005* and recommendations for strengthening the state's teacher workforce. The first chapter provides an update on teacher development and teacher quality policies. The second chapter addresses the status of the teacher workforce with an examination of the supply of and demand for teachers, and the demographic and policy factors that affect them. The third chapter describes the "underprepared" teachers that fill classrooms when fully-credentialed teachers cannot be found, including what authorizations they hold and in what subject areas they are concentrated. The fourth chapter addresses other challenges facing the teacher workforce including teachers who are ill-prepared to teach English learners, are assigned "out of field," or are novices with overly difficult assignments. The fifth chapter examines the distribution of teachers and the factors that contribute to those distribution patterns. The final chapter concludes the report and gives policy recommendations for addressing the issues raised throughout the report.

2. Policy Update

California has a history of innovative educational policymaking. The state's curriculum frameworks from the 1980s and early 1990s predated many of the national standards. Its assessment system, aligned with those standards, came before the federal requirements for such policies in 1994. The release of California's abysmal results in the 1994 National Assessment of Educational Progress (NAEP) exams pushed policymakers to redouble their efforts. In short order, the state standards were revised, new assessments were put in place, textbook adoption policies were more tightly tied to the standards, and an accountability system containing both sanctions and rewards was established. By the end of the 1990s, the state began to bolster these efforts with additional investments to strengthen the teacher workforce through expanded preparation, recruitment, and professional development systems.

The accountability system established in the 1990s remains firmly in place. In fact, with the development of new standards tests, the addition of the California High School Exit Examination (CAHSEE), and the omnipresence of No Child Left Behind, (NCLB), standards and accountability have become the state's single most powerful policy force in education. Teacher development programs, in contrast, have experienced setbacks. Budget cuts have drastically reduced the operating funds for many teacher development programs and some have been eliminated altogether. With no new state investment in teacher development programs, teachers may face difficulties as they prepare students for increasingly rigorous academic standards and requirements.

This chapter provides a broad overview of key state and federal policies impacting teacher quality. It serves as context for the detailed data in the remaining chapters.

Status of State Teacher Development Policies

In 1996, the state's class size reduction (CSR) initiative generated the demand for an additional 18,000 teachers overnight as elementary schools in every community across the state created new primary grade classrooms. In response, policymakers developed and implemented programs to increase the quantity and quality of teachers. The state invested hundreds of millions of dollars in the construction of a teacher pipeline, ushering new teachers into the profession, supporting them as they transitioned into the classroom, and providing them with additional training after they gained more experience. As the economy weakened, however, policymakers pulled back support for many of these initiatives. Recruitment programs have all but been eliminated and the state's massive investment in professional development has been cut back. The past two years have seen more stability in the operation and funding of teacher development initiatives, though some programs were restructured into block grants under AB 825 (Firebaugh). Specifically, the Professional Development Block Grant incorporated a few professional development programs, and the Teacher Credentialing Block Grant incorporated the Beginning Teacher Support and Assessment (BTSA) program. This section examines state recruitment,

induction, and professional development programs, and discusses trends in their funding and implementation.

Recruitment Programs

When teacher shortages became widespread in the 1990s, California policymakers adopted several measures to support recruitment efforts at the state and local levels. These initiatives included the Teacher Recruitment Incentive Program (TRIP) that created regional teacher recruitment centers, CalTeach to develop an online job bank, and the Teaching as a Priority (TAP) program that provided sizeable grants to districts for recruiting teachers to low-performing and hard-to-staff schools. At the peak of expenditures in 2000-01, state spending for recruitment initiatives surpassed \$150 million. The recruitment drive soon ended, however; most of the efforts begun in the late 1990s were abandoned in 2003-04 because of the state's budget crisis. Funding for the TAP block grants, TRIP and its regional recruitment centers,¹ and CalTeach was eliminated, as were the Governor's Teaching Fellowship and the Cal Grant T programs (see Exhibit 1). The TAP program has since been restored through the recently instituted Professional Development Block Grant; however, because the state does not require districts to track block grant expenditures, it will not be possible to determine how many districts are using funds for recruitment purposes or how much is being spent.

¹ A few of the regional recruitment centers continue to exist, but are no longer supported by a specific allocation from the state. The centers remaining receive limited funding from other sources and have had to significantly reduce their recruitment activities.

Exhibit 1
Background on Defunct State-Sponsored Recruitment Programs

Program	Description	Funding History
California Center for Teaching Careers (CalTeach)	Created in 1997 to serve as a “one-stop information, recruitment, and referral service” for prospective teachers. The program maintained a call center, a Web site, and two regional offices, and 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. (Note: CalTeach’s Web site was replaced by the TEACH California Web site, which provides information to prospective teachers.)
Cal Grant T	Created in 1998 to provide tuition and fee assistance to students in teacher preparation programs who agreed to teach in a low-performing school for at least one year.	Funded at \$10 million annually between 1998-99 and 2001-02; the program was discontinued in 2003-04.
Teacher Recruitment Incentive Program (TRIP)	Created in 2000; 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.	Funded at \$9.4 million from 2000-01 to 2002-03; funding was suspended in 2003-04. A few centers continue to exist, but they are no longer funded by the state.
Teaching as a Priority Block Grant Program (TAP)	Created in 2000 to provide competitive block grants to districts for providing incentives to recruit and retain credentialed teachers to teach in low-performing schools. Incentives include 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.
Governor’s Teaching Fellowship	Created in 2000 to attract and retain qualified individuals to the teaching profession. Provided \$20,000 for tuition and living costs to individuals pursuing a first teaching credential if they agreed to teach for at least four years in a low-performing school.	Funded for only two years. The program received \$21.1 million in 2001-02, but was suspended in 2002-03.

Sources: Budget Act (2005); CalTeach (2003); CDE (2003a); California Student Aid Commission (2003); CFTL (2002); Legislative Analyst’s Office (2003).

Beginning Teacher Support and Assessment (BTSA) Program

California’s Beginning Teacher Support and Assessment (BTSA) program has been at the forefront of efforts across the country to support and ease the induction of fully credentialed new teachers into the profession. Local BTSA programs provide new teachers with an experienced mentor and other supports such as orientation meetings, opportunities to meet with colleagues, formative assessments, and professional development specific to the needs of new teachers. Since its inception, BTSA has evolved from a relatively small program to an institutionalized part of the state’s strategy to improve teacher quality and reduce teacher attrition. Under SB 2042 (Alpert) teachers are required to complete a two-year induction program to earn the professional

clear credential and employing districts are required to provide access to an induction program and recommend teachers for the professional clear credential.

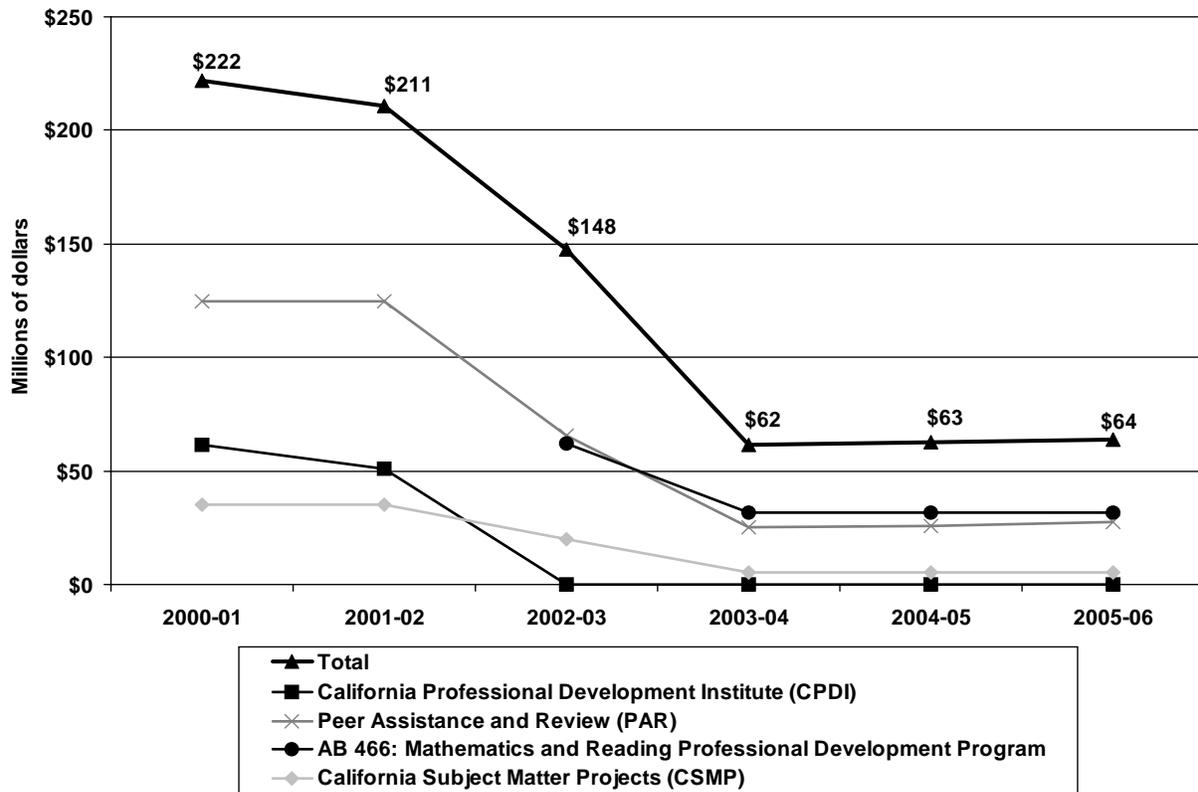
Currently, there are 148 BTSA programs across the state. In 2004-05, BTSA served over 22,500 beginning teachers, and the state expects to serve upwards of 24,000 in 2005-06 (CDE, 2005c). The budget, which peaked at \$88.1 million in 2002-03, has since experienced a slight decline as the number of new teachers entering the profession continues to fall; BTSA is funded at \$87.9 million for 2005-06. (See Appendix A for historical information on BTSA's funding and number of participants.) State policymakers transferred BTSA into the Teacher Credentialing Block Grant beginning in the 2005-06 school year. It is currently the only program in this block grant and AB 825 prohibits funds from being transferred out for purposes other than induction. We provide a more complete description of supports available to new teachers in Chapter 5.

Professional Development Programs

During the economically prosperous years of the late 1990s, professional development programs received a great deal of support from state policymakers. Many of the state's larger professional development initiatives, including the Peer Assistance and Review (PAR) program and the California Professional Development Institutes (CPDIs), were established during this period. Other older programs, like the California Subject Matter Projects (CSMP), received large infusions of new funds. (See Appendix A for brief descriptions and funding updates for each of the state and federal professional development programs discussed in this section.)

Over the past several years, fiscal constraints have eliminated or greatly streamlined the budgets and goals of several professional development programs. Four of the five major state-funded professional development programs underwent a collective reduction in their budgets from \$222 million in 2000-01 to about \$62 million in 2003-04; the funding for professional development has remained at that level ever since (see Exhibit 2). Programs have adjusted to operating in this financial environment by tapping external funding sources, decreasing the number of participants, or decreasing the amount spent per participant. California's professional development budget for 2005-06 will, apart from cost of living adjustments (COLA), maintain 2004-05 funding levels (CDE, 2005d; Budget Act, 2005).

Exhibit 2
Funding Levels for Select State Professional Development Programs,
2000-01 to 2005-06



Sources: Budget Act (2005); CDE (2004a, 2004b, 2004c, 2005d).

Federal funding for professional development has remained relatively stable in recent years, and even showed a slight increase from the 2004-05 fiscal year. For 2005-06, Reading First will receive \$152 million, the California Mathematics and Science Partnership Program (CaMSP) will operate with a \$24 million budget, and the Teacher and Principal Training and Recruiting Fund will receive \$322 million (although not all of that amount will be spent on professional development) (CDE, 2005d). However, the overall investment of state and federal resources in teacher professional development in California has declined since the start of the decade.

Additional Influences on Teacher Development

In addition to state policies, teacher development in California has been impacted by both the NCLB and the settlement of the *Williams v. California* lawsuit. NCLB requires that every teacher in the state be “highly qualified” by 2005-06 and the legislation that followed the *Williams* settlement reinforced these teacher-quality requirements. The policies are intended to

ensure that all students, particularly those in low-performing schools, have access to effective teachers.

The No Child Left Behind Act

For the purposes of NCLB, the state defines a “highly qualified” teacher as one who has a bachelor’s degree, has a credential or is working toward one in an alternative certification program (e.g., an intern program), and has demonstrated competence in each assigned subject area. Districts have responded by seeking qualified candidates, encouraging teachers to complete appropriate requirements, and steering uncredentialed teachers who have subject-matter competency to an intern program. As a result, the state has seen a decrease in the number of emergency permit holders and an increase in the number of interns (see Chapter 4 for more information on these changes.)

State policymakers have responded to NCLB by taking steps to phase out emergency permits that authorize teachers who have not demonstrated subject-matter competency. Two non-NCLB-compliant options remain, however: the Short-Term Staff Permit and the Provisional Intern Permit (see Chapter 4 for details). Further responding to NCLB, the state now requires that all new multiple-subject credential candidates pass the California Subject Examination for Teachers: Multiple Subject (CSET) before taking responsibility for whole-class instruction either as a student teacher or as the teacher of record (Esch et al., 2004). Veteran multiple-subject teachers who previously met their subject-matter competency via coursework, on the other hand, must now complete the “high objective uniform state standard of evaluation” (HOUSSE), which assesses teachers’ qualifications and experience. Point values are assigned for teachers’ educational credits, years of experience, professional development, and leadership and service activities. The state-developed HOUSSE form lists qualifying professional development activities and leadership roles, but the district can also define additional ones (Esch et al., 2004).

NCLB has also led to changes in reporting requirements. Schools and districts must report annually on the School Accountability Report Card (SARC) the percent of classes in core academic subjects taught by “highly qualified” teachers or face the possibility of losing federal funds. The federal policy only applies to subject-matter placements, however, and does not require districts to report on the percent of English-learner classes taught by teachers without the proper authorization.

Recent guidance from the United States Department of Education (USDOE) grants states until 2006-07 to meet NCLB’s highly qualified teacher requirement if they are making progress toward the goal (Keller, 2005). Statewide, in 2004-05, 74% of core classes were taught by NCLB-compliant teachers, and 83% of non-NCLB-compliant veteran teachers participated in professional development (HOUSSE) to become compliant (CDE, 2005e). High- and low-poverty schools saw slight differences in the percentage of NCLB-compliant teachers. In the lowest poverty schools, on average, 82% of all core academic classes were taught by an NCLB

compliant teacher, compared to 76% in the highest poverty schools. There were also differences by school level. In 2004-05, an average of 82% of all core academic classes in elementary school was taught by an NCLB-compliant teacher, compared with 71% for middle school and 74% for high school (CDE, 2005g, 2005j, 2005p, 2005q).

NCLB and Special Education

Further complicating NCLB is recent guidance from the U.S. Department of Education specifying that special education teachers of core academic subjects, including mathematics, reading, and science, be highly qualified in the subjects they teach. For the first time, the Individuals with Disabilities Education Act (IDEA) 2004 reauthorization dealt with special education credentialing. Guidance issued this summer by the U.S. Department of Education clarified that the reauthorized IDEA requires that, in order to be highly qualified, special education teachers must hold a special education certificate or be licensed as special education teachers *in addition to* holding a bachelor's degree and demonstrating subject-matter competency in all subjects they teach (USDOE, 2005).

As with general education teachers, NCLB allows states to develop a multisubject HOUSSE so veteran special education teachers can demonstrate subject-matter competency. New special education teachers who teach multiple core academic subjects and are highly qualified in mathematics, language arts, or science at the time they are hired have two additional years after their hire date to become highly qualified in all other academic subjects they teach. They, too, may use HOUSSE to satisfy this requirement. Teachers only providing consultative services or supporting student study skills need not be highly qualified in all subjects they support (USDOE, 2005).

Williams v. California

The settlement of the *Williams v. California* case in 2004 highlighted the inequitable distribution of instructional resources to California's most vulnerable students and lowest-performing schools. The plaintiffs identified three areas of inequitable resource distribution: school facilities, textbooks, and teachers. Following the settlement, California passed several pieces of legislation to tackle each of these issues. No new funds were allocated to address them, however. For teacher quality, the state agreed to:

- Meet the NCLB requirement that all core academic teachers be highly qualified by 2006.
- Require county superintendents to increase monitoring of teacher quality and misassignments (including whether teachers who have 20% or more English-learners in their classes have proper training to teach second-language learners), and address hiring and retention practices.

- Empower fiscal crisis and management assistance teams to assist districts that fall short of teacher-quality goals.
- Streamline 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).
- Require that the Principal Training Program include training on monitoring and addressing teacher quality.

In 2005, AB 831 (Goldberg) clarified many of the teacher-quality provisions outlined in previous settlement legislation. County superintendents must annually monitor and review schools ranked in API deciles 1-3 if a state or federal intervention program does not have those schools currently under review. They also must conduct yearly reviews of schools and districts deemed likely, based on past experience or other available information, to have problems with teacher misassignments and teacher vacancies. This provision mirrors existing code, but adds the tracking of open-teaching positions. Tracking open positions will help monitor the extent to which substitute teachers, who may or may not have subject-matter competency, cover unfilled positions, a situation that can impair student achievement if in place for long periods of time. Lastly, AB 831 specifies that a teacher misassignment exists when a teacher without the requisite EL authorization has at least one student in his or her class who is an English learner (Decent Schools for California, 2005).

In short, the *Williams* case has led the state to augment and intensify its normal practices of monitoring and reporting on teachers who are not fully authorized for their assignments, especially in the state's lowest-performing schools. School and district administrators are under greater scrutiny to hire teachers who hold the proper authorization both for teaching English learners and for teaching in their subject areas (see Chapter 5 for a discussion of both of these topics).

Conclusion

This is a challenging time for California. Accountability for student achievement is at a high point, and California's students are not faring well. In the aftermath of the *Williams* suit, the public is looking more closely at the way education resources, including teachers, are distributed. Meanwhile, NCLB has introduced a federal presence into the definition and monitoring of teacher qualifications. The state is recovering from the acute teacher shortages of recent years, but, as we will discuss in later chapters, it is also far from ensuring that every student has a fully prepared and effective teacher, especially in the lowest-performing schools.

Unfortunately, this is an especially problematic time to tackle such difficult challenges. The state is in the midst of a continuing budget crisis, and many investments in teacher recruitment and teacher professional development that began in the 1990s have since been cut altogether or dramatically reduced, potentially threatening both the quantity and quality of the

teacher workforce. NCLB and the *Williams* case have added to an already high-stakes accountability environment, but they may not contribute the resources necessary to ensure that their requirements can be readily achieved by students, teachers, and schools.

The remaining chapters define some of the problems that California is facing in staffing its classrooms, point out contributing factors, and provide detail on how the state and local districts are responding, or not responding, to the issues we raise.

3. Teacher Supply and Demand

California's Teacher Workforce

- In 2004-05, California came closer to meeting its need for fully credentialed teachers than any time since the first year of class size reduction implementation in 1996-97. The gap has not been completely closed, however. More than 20,000 underprepared teachers still remain.
- The demand for fully credentialed teachers is expected to grow through 2014-15. Trends in teacher supply sources do *not* indicate that there will be enough fully credentialed teachers to meet demand. Instead, the state will again need to employ high numbers of underprepared teachers—nearly 33,000 by the mid-2010s. This widening gap between supply and demand is primarily a result of increasing teacher retirements and decreasing production of new credentials.

Teacher Retirement

- In 2004-05, California employed over 51,000 teachers who were over the age of 55 and over 97,000 teachers over the age of 50. If all these teachers retired at the average teacher retirement age of 61 over the next 10 to 11 years, the state would have to replace 97,000 teachers, or 32% of the present-day teacher workforce. Retirements are projected to peak in 2008-09 with approximately 4.8%, or about 15,000 teachers, of the workforce leaving in that year due to retirement alone.

Credential Production

- A decline in credential production is projected because teacher preparation programs have experienced 2 years of declining enrollment. From 2001-02 to 2002-03, enrollment in teacher preparation programs declined 4% (from approximately 76,000 to 73,000) and from 2002-03 to 2003-04, it dropped another 8% (from approximately 73,000 to 67,500).

Student Enrollment and Class Size

- A student enrollment bubble working its way through the K-12 system is expected to create a higher demand for secondary teachers than in previous years. The California Department of Finance expects high school enrollments will expand by about 17% from 2001-02 through 2009-10.
- California's budget problems in the early 2000s have forced some schools and districts to cut expenditures by increasing class sizes. Statewide, the average class size rose by slightly more than one student to 27.3 students per class between 2002-03 and 2004-05.

California's teacher workforce is the largest in the country, with over 300,000 teachers serving a student population of over 6 million. In this era of focused attention on raising student achievement, policymakers are concerned about whether the state will have the teachers needed to help students succeed. This chapter addresses questions about the current and future teacher workforce. We begin by describing historical trends in the workforce, underscoring the impacts of student enrollment growth and class size reduction in the late 1990s. We then use available data to project the supply and demand of teachers into the future, pinpointing where a gap between the two is likely to persist. Finally, we outline the factors that shape the demand and supply of teachers, including the demographic and policy factors that affect each.

California's Teacher Workforce

The size of the teacher workforce is primarily a function of the number of students in the state's classrooms and the size of those classes: the more students and the smaller the classes, the greater number of teachers needed. During the 1990s, student enrollment grew dramatically. In the middle of the decade, state policymakers implemented class size reduction (CSR) lowering the size of primary grade classes (K-3) to 20 students. As a result, California's K-12 teacher workforce grew by 32% from 1994-95 to 2000-01. The year of sharpest growth was the first year of CSR implementation (1996-97), when the teacher workforce expanded by over 18,000 teachers, or 8%, in one year (see Exhibit 3).

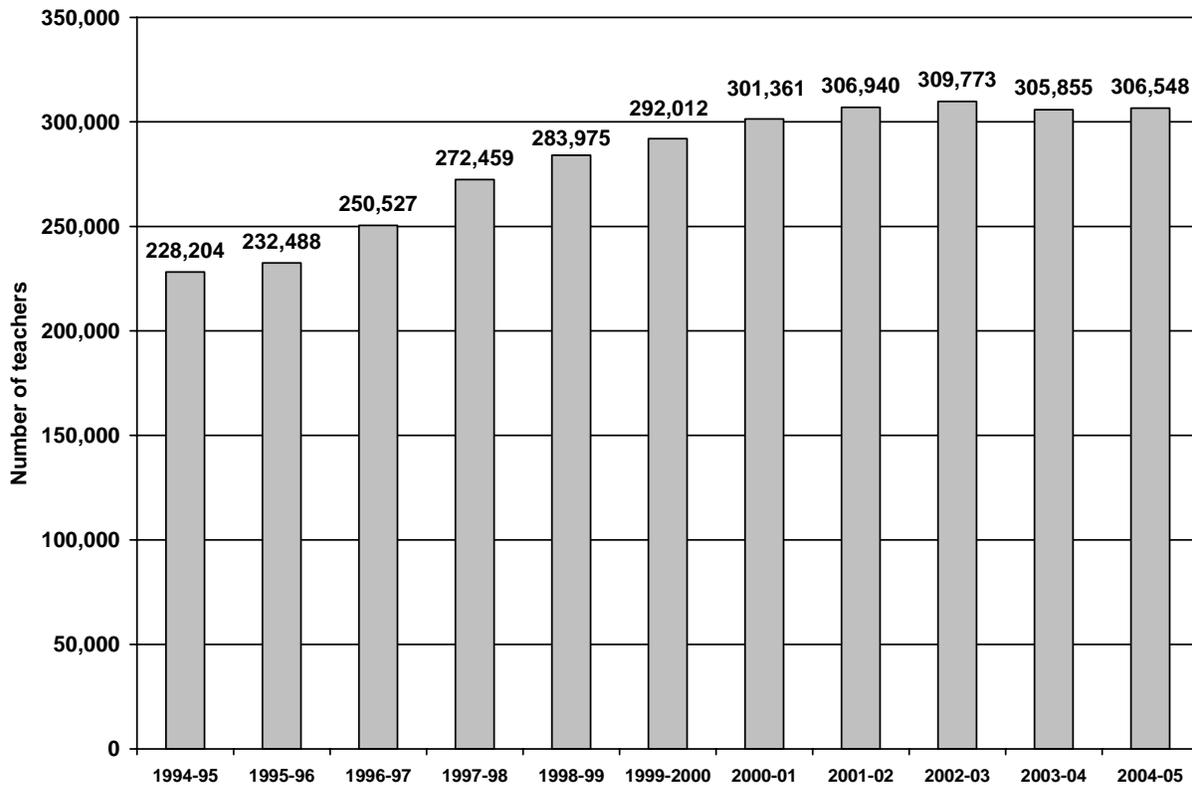
Facing a rapid increase in the number of teachers needed, many California districts were unable to find a sufficient number of fully qualified teachers and consequently resorted to hiring teachers without full credentials, referred to here as "underprepared" teachers. Underprepared teachers include those holding emergency permits, waivers, and other authorizations. These are individuals who do not meet the "highly qualified" provisions of No Child Left Behind (NCLB), as described in the previous chapter. The group also includes interns, individuals who have not yet received a preliminary credential but who have demonstrated subject-matter competency and are enrolled in a program to assist them to get a credential, though interns are considered NCLB-compliant.

The state had long offered options for hiring underprepared teachers in emergency situations, but in the late 1990s and early 2000s, emergency permits were routinely issued to new teachers. At the peak of the teacher shortage, over 42,000 teachers did not hold full credentials. Moreover, one in every two new teachers entering the profession had not yet completed their preparation. (Underprepared teachers are discussed in greater detail in chapter 4.)

Since that crisis point, the situation has steadily improved. Districts began to recover from CSR and enrollment began to level off. California implemented a series of teacher recruitment and preparation policies to increase the number of new credentials produced. Further, the state's economy began to falter, resulting in a less-competitive job market and boosting incentives for teachers to stay in the profession. As a result, demand for teachers slowed considerably in the

last five years. During that timeframe, the workforce has grown by only 1.7% (just over 5,000 teachers). In 2004-05, California came closer to meeting its need for fully credentialed teachers than any time since the first year of CSR implementation (1996-97). The gap has not been completely closed, however. More than 20,000 underprepared teachers still remain.

Exhibit 3
California K-12 Teacher Workforce, 1994-95 to 2004-05



Sources: CDE (1995a, 1996a, 1997a, 1998a, 1999a, 2000a, 2001a, 2002a, 2003b, 2004d, 2005f); SRI analysis.

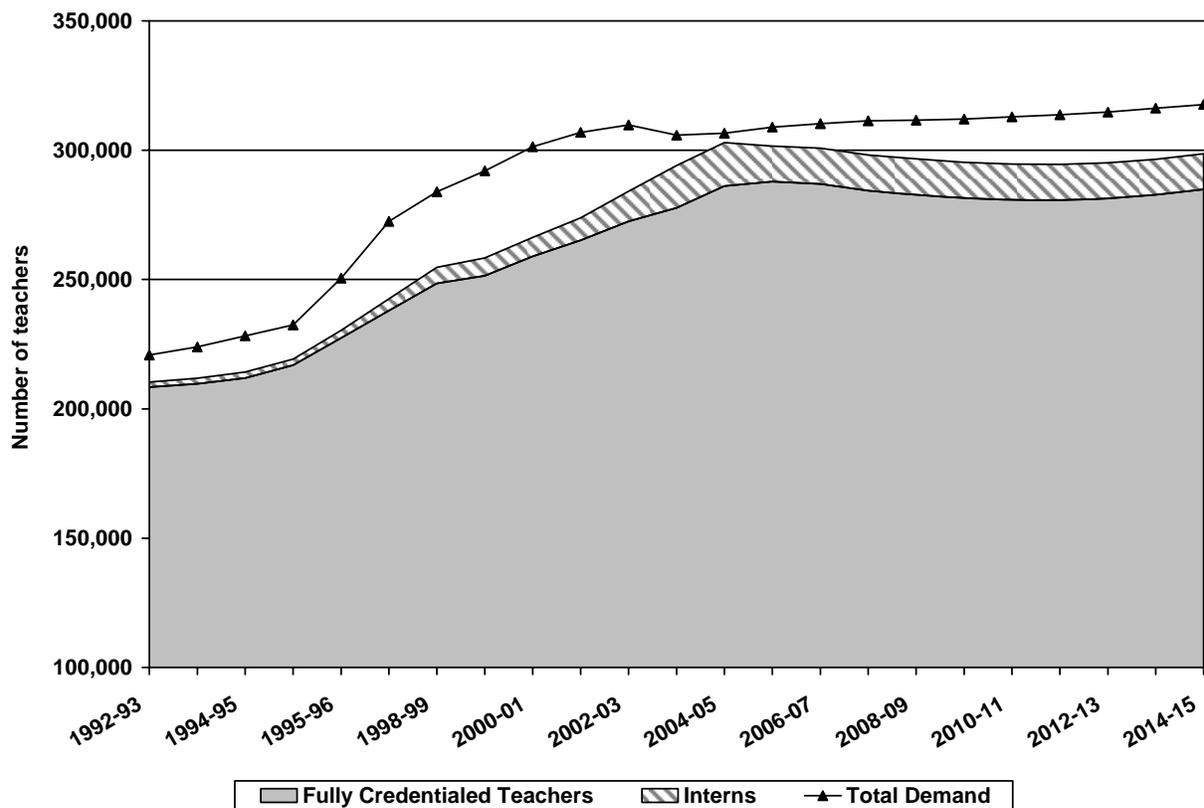
Note: See Appendix B for additional information.

Projecting Future Supply and Demand

The severe shortage of credentialed teachers in the late 1990s resulted from lack of attention to demographic shifts and the impact of policies, particularly class size reduction, intended to improve teaching and learning. California was caught off guard and had to resort to hiring tens of thousands of teachers who had not met the state's minimum qualifications. The state has spent years recovering from this crisis, and even still has a considerable number of underprepared teachers in its schools. Clearly, California does not want to repeat this scenario. Our projections of the future demand and supply of teachers, however, suggest that without a significant policy intervention, the state may again face dire teacher shortages over the next 10 years.

Based on an examination of trends in teacher demand factors (i.e., student enrollment, retirement, and attrition), we project the demand for fully credentialed teachers will grow through 2014-15 (see Exhibit 4). Given trends in teacher supply sources (i.e., new credential production, reentrants, and teachers credentialed out-of-state), we do *not* anticipate that there will be enough fully credentialed teachers to meet demand. Instead, absent policy intervention, the state may again need to employ high numbers of underprepared teachers—nearly 33,000 by the mid-2010s. Many of these underprepared teachers will be interns, who are compliant with NCLB. Even with interns, however, there will not be enough to fill the gap.¹ Some non-NCLB-compliant teachers will still need to be employed—as many as 19,000 in 2014-15. Historically, underprepared teachers are disproportionately found in low-performing and hard-to-staff schools (discussed in greater detail in Chapter 6); consequently, efforts to improve student achievement and teacher quality may be hindered.

Exhibit 4
Projected K-12 Public School Teacher Workforce Through 2014-15



Sources: CTC (1998a, 1999a, 1999b, 2000, 2001a, 2001b, 2002a, 2003a, 2003b, 2003c, 2004a, 2005a); CDE (1993a, 1993b, 1994a, 1994b, 1995a, 1995b, 1996a, 1996b, 1997a, 1997b, 1998a, 1998b, 1998c, 1999a, 1999b, 1999c, 1999d, 2000a, 2000b1, 2000c, 2001a, 2001b1, 2001c, 2002a, 2002b1, 2002c, 2003b, 2003c1, 2003d, 2004d, 2004e1, 2005g, 2005f, 2005h, & 2005n); CDOF (2004); CalSTRS (2005); SRI analysis.

Notes: See Appendix C for additional information.

¹ Individualized Internship Certificates (IICs, described in detail in Chapter 4) are not included in the projected number of interns beginning in 2005-06. Presently, there are too few years of available data on IICs to adequately estimate a future trend.

The widening gap between supply and demand is primarily a result of (1) projected increasing teacher retirements, and (2) projected decreasing production of new credentials.² (Both of these factors are covered in greater detail later in the chapter.) Absent a policy intervention, we believe these assumptions are the most probable. If, however, credential production were to maintain its current all-time high level, the gap between the supply of and demand for fully credentialed teachers would shrink to fewer than 6,610 by 2014-15. Furthermore, the state would likely fill that gap with interns (rather than non-NCLB-compliant teachers) by 2006-07. While this alternative scenario offers hope, it is unlikely given current enrollments in teacher preparation programs and the lack of current or planned investments to boost those numbers.

Although the state presently enjoys the lowest number of underprepared teachers since CSR was implemented, our projections suggest that policymakers cannot assume that this trend will continue. Data on the factors that drive supply and demand indicate that the positive trends of the last 5 years will soon reverse. The demand for teachers will continually fluctuate given ongoing changes in policy and state finance, as well as social and demographic factors, making it critically important for the state to attempt to anticipate and prepare for those changes. In the next two sections, we describe the factors that drive the demand for teachers, and the supply.³ Some factors are policy sensitive; others are not. Each of them, however, should be monitored closely to anticipate increases in demand, or shortfalls in supply.

Teacher Demand Factors

A few central factors undergird the demand for teachers in California. First, and most critically, the ebb and flow of student enrollment in the state and at different school levels can affect both the number and type of teachers needed. Changes in student enrollment combine with state and local policies regarding class size to determine total demand. Second, teacher retirements contribute to fluctuations in teacher demand as well. As teachers leave the workforce each year, they need to be replaced. A third factor, and most difficult to track due to poor data sources, are teachers who leave the profession for reasons other than retirement (referred to here as teacher attrition). The following section discusses each of the demand factors in further detail.

Student Enrollment

The 1990s saw impressive growth in the state's K-12 student population. In the 10 years between 1990-91 and 1999-2000, California's public K-12 education enrollment grew by over one million students or 23%. By 2004-05, the state's public school enrollment reached over 6.3

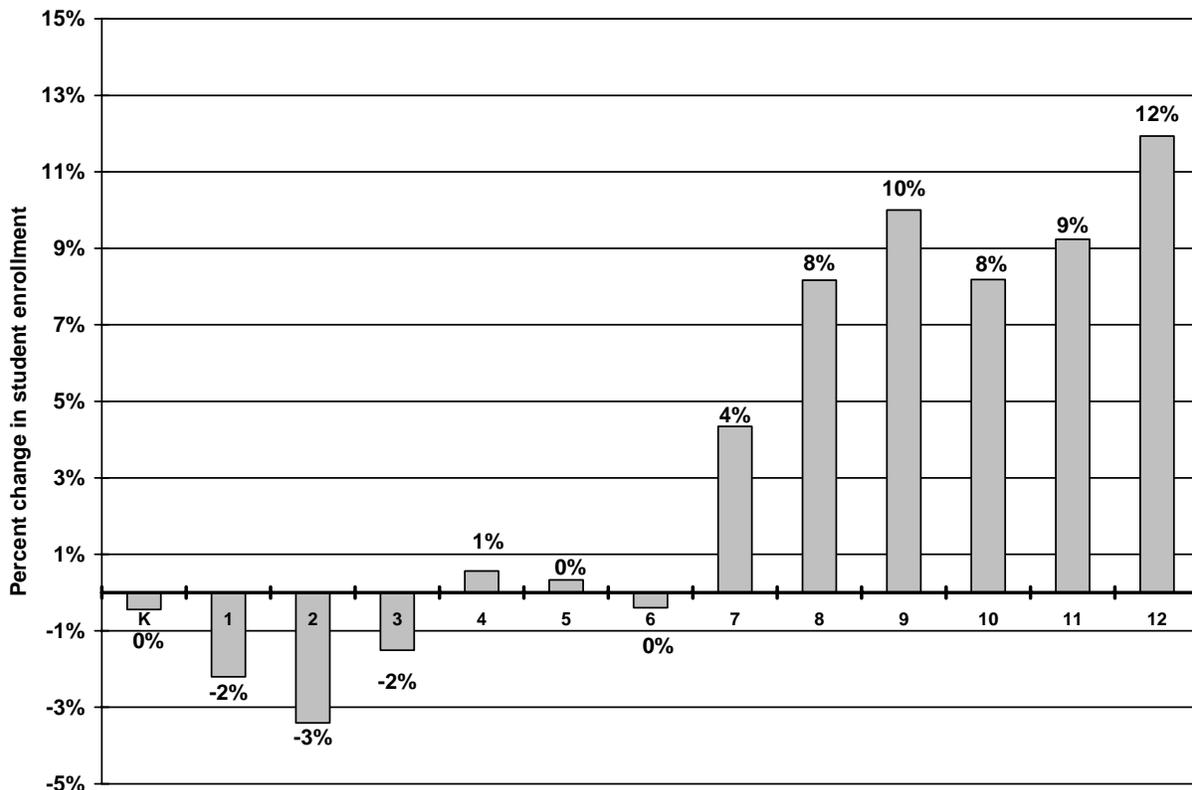
² Credential production is estimated using a 4-year rolling average of credentials issued. For more information, see Appendix C.

³ Some of the factors discussed in the next section are not factored into the projections illustrated in Exhibit 4 due to the insufficiency of data on the magnitude of their impacts. For complete information on how projections were calculated, see Appendix C.

million students. Of that population, one-quarter were English-language learners and 11% were special education students. Student enrollment is projected to expand at a much more modest rate (an increase of approximately 435,000 students or only 7%) in the first decade of the 21st century than in the previous decade.

Currently, an enrollment bubble is working its way through the K-12 system. This development is expected to create a higher demand for secondary teachers than in previous years. In the primary grades (K-3), student enrollment actually declined between 2001-02 and 2004-05 and in the upper elementary grades, the state experienced either minimal (1%) or no growth in enrollment. In contrast, the middle and high school grades experienced student enrollment growth during that same period. In the seventh and eighth grades, for example, enrollment increased by 4% and 8% respectively between 2001-02 and 2004-05. At the high school level, enrollment increased by 8% in the 10th grade, 9% in the 11th grade, and 12% in the 12th grade (see Exhibit 5).

Exhibit 5
Change in K-12 Public School Enrollment, by Grade, 2001-02 to 2004-05

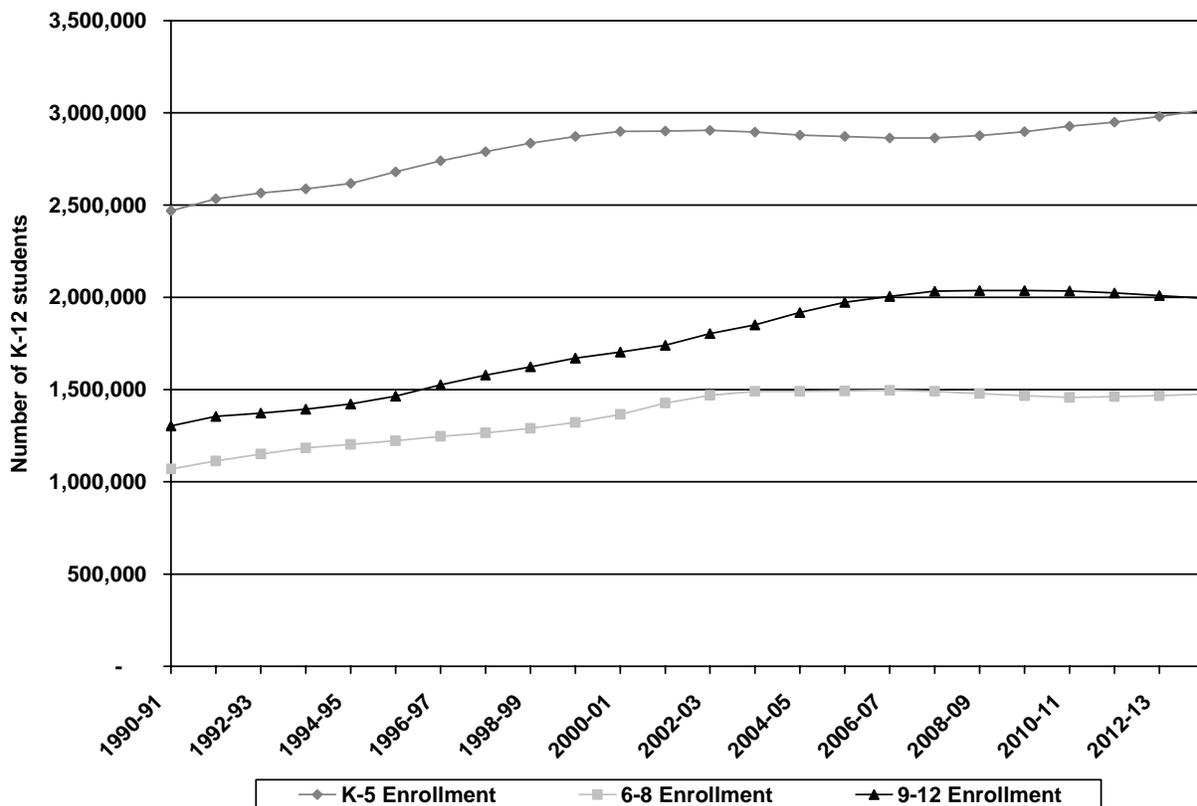


Sources: CDE (2004f); SRI analysis.

Looking ahead, the California Department of Finance (CDOF) expects high school enrollments will expand by about 17% from 2001-02 through 2009-10 (CDOF, 2004). This expectation may be cause for concern since district and school officials report having difficulty filling particular high school assignments. Administrators reported chronic shortages of fully credentialed candidates in math, science, and/or special education in all 10 case study districts. Human resource officials in district offices must be mindful of these shifts as they recruit and hire teachers in order to ensure that they have the right type of teachers to meet the growing need at the secondary level. After 2009-10, the state expects high school enrollment to level off.

On the other hand, enrollment growth at the elementary level (K-5) is projected to decline by 0.53% until 2007-08, before increasing again through 2013-14. Overall, the CDOF projects student enrollment to increase just slightly in the years to come. By 2013-14, total student enrollment is expected to reach 6.49 million students, an increase of 4% over the next 10 years (see Exhibit 6).

Exhibit 6
Actual and Projected K-12 Public School Enrollment, 1990-91 to 2013-14



Source: CDOF (2004).

Note: Data for 1990-91 to 2003-04 are actual numbers; data for 2004-05 to 2013-14 are projections.

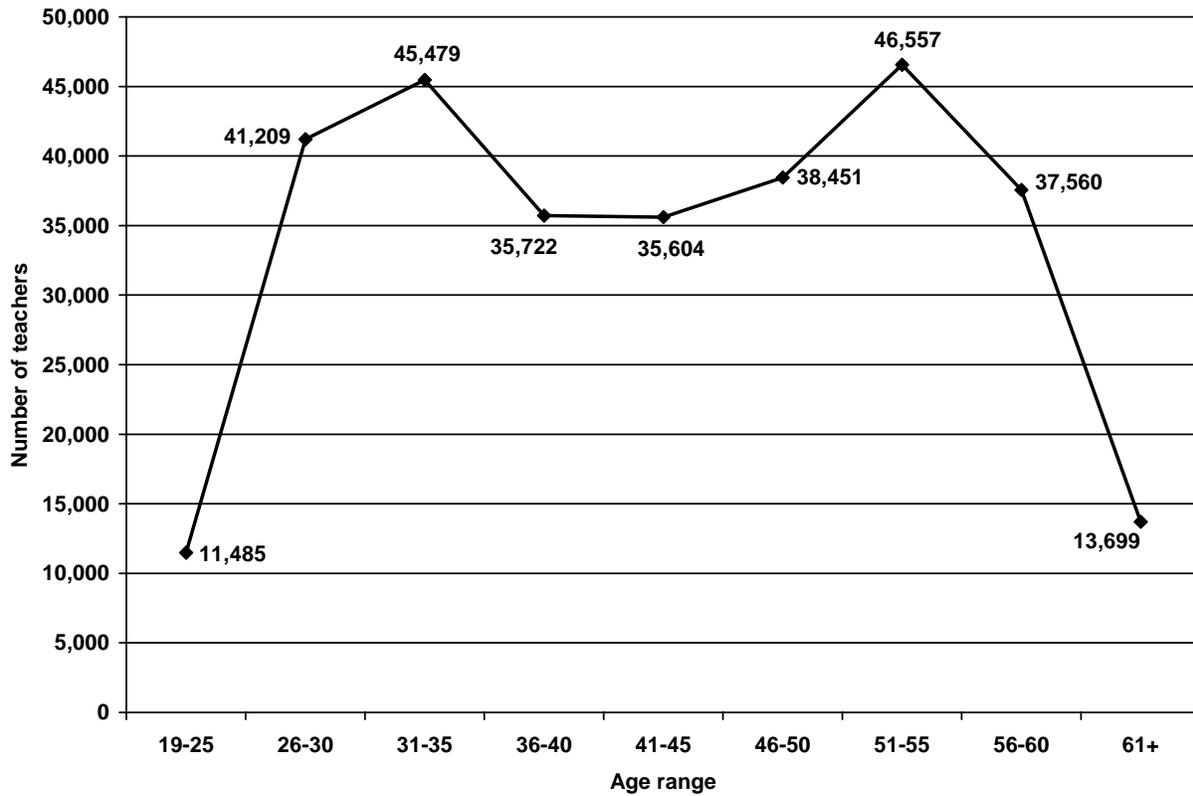
We expect to see varying demand patterns for teachers at different grade levels based on these student enrollment projections. In 2013-14, we expect a leveling off and even a slight decline in the demand for secondary teachers compared to prior years while also experiencing an increased demand for elementary teachers. Future efforts to ensure that the supply of teachers meets specific school-level demand will need to consider these differing demand patterns.

Other factors to consider are state and local policies regarding class size. California's popular CSR program in grades K-3, for example, pushed the demand for elementary teachers beyond what otherwise would have been needed to meet rising enrollment. California's budget problems in the early 2000s have also forced some schools and districts to cut expenditures by increasing class sizes. Statewide, the average class size rose by slightly more than one student between 2002-03 and 2004-05 to 27.3 students per class. More students per class reduce the demand for teachers. Not all communities want to sacrifice class size to save money, however. District officials in one small rural community, for example, tried to increase class size in K-3 to balance the budget, but community outcry forced the district to reinstate the smaller class sizes and cut costs in other ways.

Retirement and Attrition

In addition to filling new teaching positions created by student enrollment growth, schools must also find replacements for teachers who leave the profession as a result of retirement or attrition. In 2004-05, California employed over 51,000 teachers who were over the age of 55 and over 97,000 teachers over the age of 50 (see Exhibit 7). If all these teachers retired at the average teacher retirement age of 61, California would need to replace 51,000 teachers in the next 5 years. Over the next 10 to 11 years, the state would have to replace 97,000 teachers, or 32% of the present day teacher workforce (2004-05). The need to replace their knowledge and experience should be a concern to policymakers, especially during a period of reduced state investment in professional development. At schools with fewer veteran teachers, these departures may be particularly detrimental and leave teachers not yet prepared for leadership roles to assume them prematurely.

**Exhibit 7
Age Distribution of K-12 Public School Teachers, 2004-05**

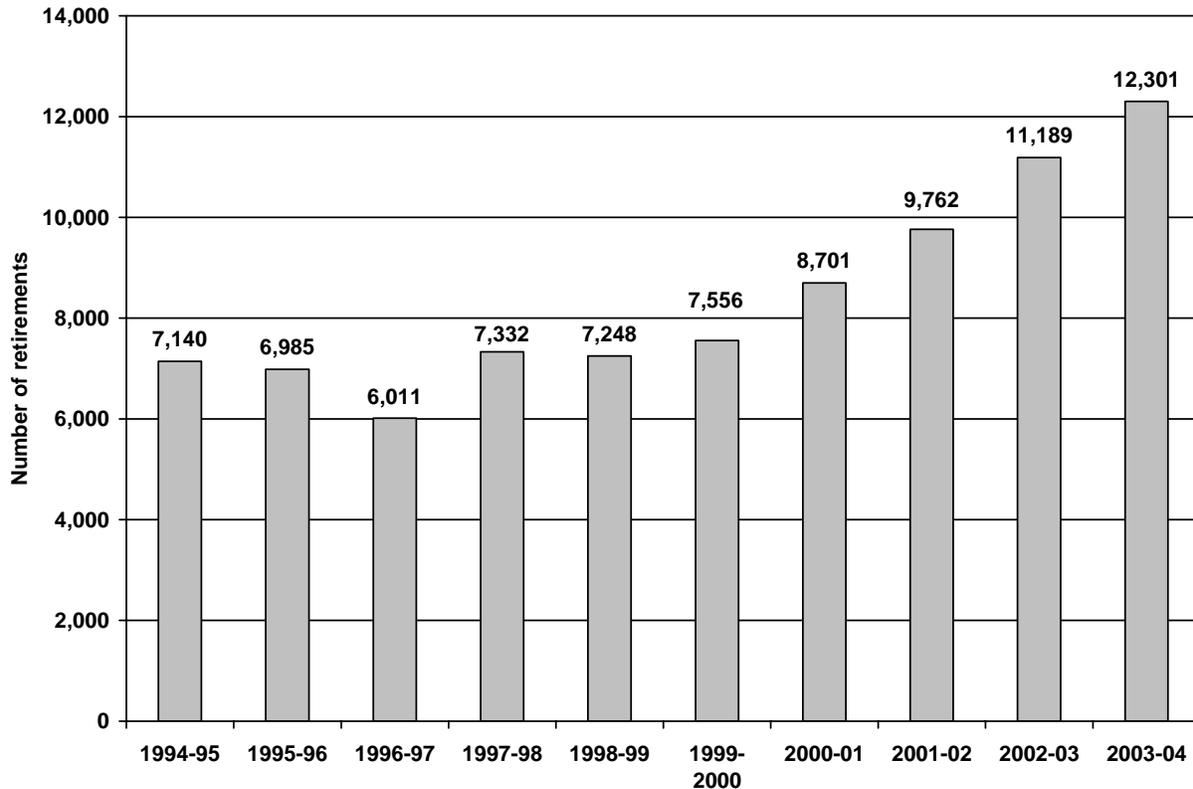


Source: CDE (2005i).

California is already experiencing an increase in the number of retirements among K-12 teachers and community college faculty.⁴ Over the past 10 years, annual retirements have increased from approximately 7,100 in 1994-95 to over 12,000 in 2003-04, an increase of 41% (see Exhibit 8). We project retirements to peak in 2008-09 with approximately 4.8%, or about 15,000 teachers, of the workforce leaving in that year due to retirement alone.

⁴ These numbers come from CalSTRS and do not disaggregate K-12 teachers from those in community colleges.

Exhibit 8
STRS Membership Retirements, 1994-95 to 2003-04



Source: CalSTRS (2004).

Some district and school officials in our case studies reported facing increased retirements among their staff. A principal of a suburban high school, for example, reported losing one-third of his staff in a single year due to retirements. In a small rural district, officials are bracing for an exodus of retirees in the next two to three years; 9% of the teaching staff is expected to retire. Replacing so many teachers in a single school year can be difficult, but hiring teachers to replace retiring teachers may only be the beginning of the challenges for these schools. If schools replace veteran teachers with novice teachers, the proportion of beginning staff will grow. As a result, schools and districts may need to dedicate more and already scarce resources (e.g., professional development funds, mentor teachers, instructional coaches, etc.) than are currently allocated in order to recruit, hire, and support this population of inexperienced teachers.

Changes in policy may also have an impact on retirements. For example, in 1996-97 (the first year of class size reduction), there was a sizeable 1-year drop in the number of retirements. It is not clear what contributed to that change, though. Teachers who were at retirement age may have agreed to continue working as schools and districts scrambled to find teachers to fill newly created teaching positions.

In addition to retirement, attrition also creates a demand for teachers. Unfortunately, statewide data systems do not allow for precise analyses of teacher attrition. In our projections, we estimate the annual attrition rate to be 4.6% of the workforce, but this number is imputed from teacher-level state databases, rather than an actual count of the number of teachers who leave each year.⁵ Given the importance of this factor in determining teacher demand, the state would be well served by investing in a data system capable of tracking where teachers go when they leave a classroom assignment, why they leave the profession, whether they go to another district, or whether they take another position within the district, among other variables.

With the demand for teachers expected to increase due to student enrollment and retirements, the ready supply of teachers assumes paramount importance. We turn to that concern in the next section.

Teacher Supply Factors

With over six million students enrolled in California's public school system, trying to staff all the state's classrooms with fully credentialed teachers constitutes a monumental undertaking. Although the majority of employed teachers in any given year remain in the workforce the following school year, a number of positions must be filled each year. These open positions are largely filled with three types of fully credentialed teachers: newly credentialed teachers, teachers returning after a leave of absence (reentrants), and teachers who are trained in other states but want to teach in California.

Like the demand factors, various social, political, and economic variables can affect the supply of teachers in the state. Because of the way California prepares teachers, the supply of newly credentialed teachers depends on the capacity of public and private universities to produce them. These institutions' size and structure, however, can inhibit a nimble and responsive reaction to changing political and budgetary priorities. The supply of reentrant and out-of-state teachers, meanwhile, is due to something difficult to measure: individual choice. That is, deciding to move to California or reenter the teaching profession is a personal decision that can be influenced, but not controlled, by policy decisions.

The following sections examine supply data for each type of teacher and examine how each affect the overall supply of teachers in California.

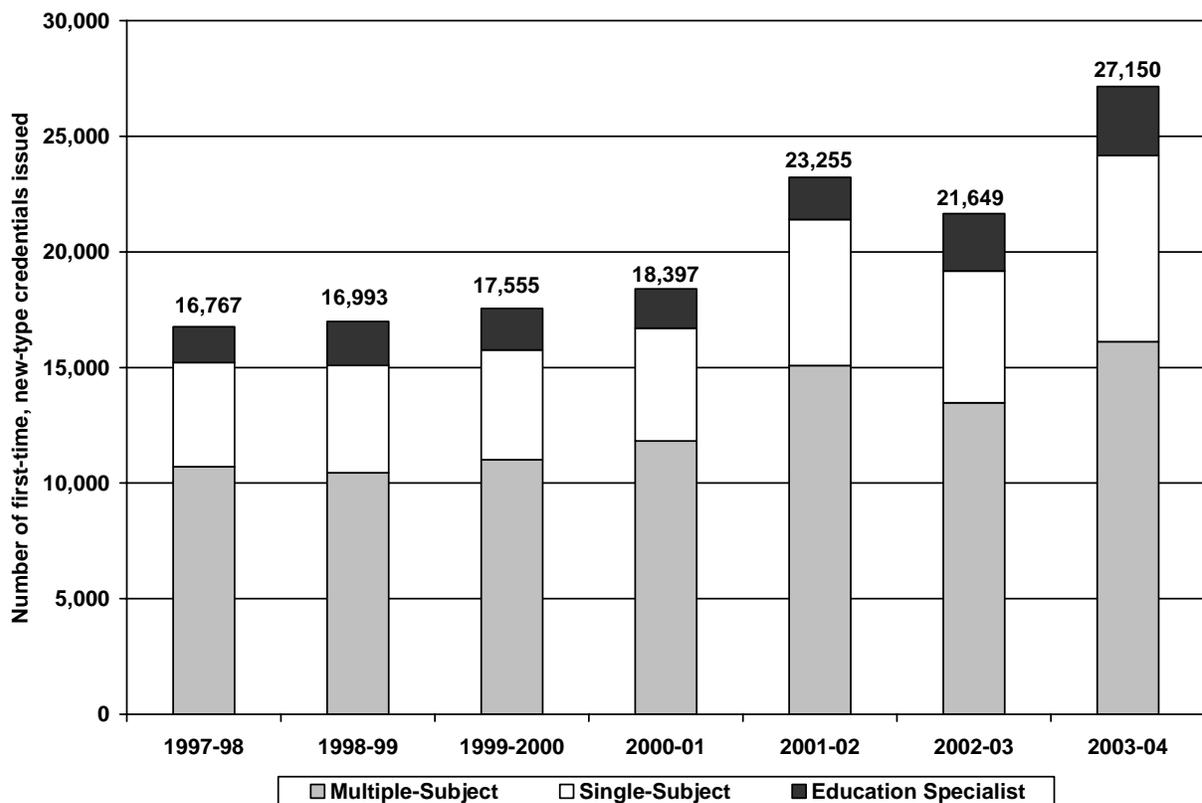
Newly Credentialed Teachers

California's institutions of higher education (IHEs) did not have the structures in place to respond quickly to the unprecedented increase in demand created by California's class size reduction program. For the first few years after CSR, credential production increased very

⁵ See Appendix C for how attrition was calculated. State databases do not track individual teachers by unique identifiers over time therefore we cannot obtain an accurate account of attrition.

slowly. Between 1997-98 and 1999-2000, the state legislature dedicated additional funding to the California State University system to increase the production of teacher candidates; independent universities, meanwhile, began building new or expanding existing credential programs, spurring a 26% increase in credentials in 2001-02. Since then, the credential production trajectory has been unclear. In 2002-03 there was a 7% decline in credentials produced followed by a 25% increase in 2003-04 of approximately 5,500 credentials. By 2003-04, California's IHEs were producing 62% more credentials than they were in 1997-98—over 27,000 in 2003-04 compared to nearly 17,000 in 1997-98. Overall, the number of education specialist credentials granted each year continues to lag behind that of multiple- and single-subject credentials (see Exhibit 9). The low production numbers contribute to the continued shortages of special education teachers throughout California.

Exhibit 9
New Preliminary Teaching Credentials Issued, 1992-93 to 2003-04



Sources: CTC (1998a, 1999a, 2000, 2001a, 2002a, 2003a, 2004a, 2004i, & 2005a).

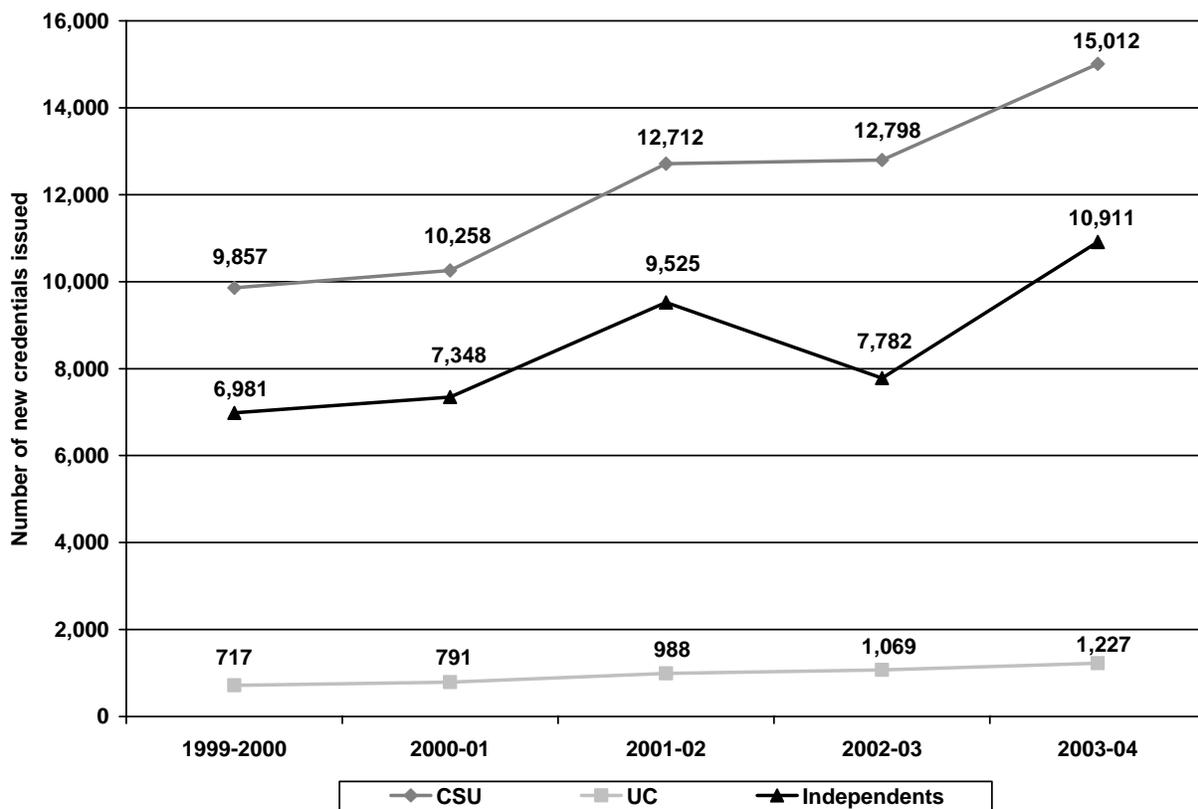
Note: See Appendix B for additional information.

Looking ahead, a decline in credential production is projected because teacher preparation programs have experienced 2 years of declining enrollment. From 2001-02 to 2002-03, enrollment in teacher preparation programs declined 4% (from approximately 76,000 to 73,000)

and from 2002-03 to 2003-04, it dropped another 8% (from approximately 73,000 to 67,500) (CTC, 2005a). Funding cuts to higher education, discussed in more detail below, may also adversely impact credential production.

The California State University (CSU) system continues to be the most prolific producer of new preliminary credentials in the state, issuing approximately 15,000 or 55% of all new preliminary credentials in 2003-04.⁶ CSU outlined its commitment to increasing credential production in its 1998 policy statement, “CSU’s Commitment to Prepare High-Quality Teachers.” CSU’s efforts have produced results: since the beginning of the decade the CSU system has increased credential production by approximately 46%, from over 10,000 credentials in 2000-01 to over 15,000 credentials in 2003-04 (see Exhibit 10).

Exhibit 10
New Preliminary Teaching Credentials Issued, by Institution, 2000-01 to 2003-04



Sources: CTC (1998a, 1999a, 2000, 2001a, 2002a, 2003a, 2004a, 2004i & 2005a).

Note: See Appendix B for additional information.

⁶This number includes multiple-subject, single-subject, and education specialist preliminary and professional clear credentials. It does not include intern credentials.

The independent universities reacted to the increase in demand for teachers during the first half of the 1990s more quickly than the CSU system. From 1991-92 to 1996-97, California's independent universities went from producing 34% to 42% of all California university trained teachers.⁷ As public funding for CSU credential programs increased, however, independent universities lost a small percentage of market share to the CSU system in the second half of the 1990s. By 1999-2000, independent universities were producing 40% of all California university trained teachers compared to CSU's 56%.

Even with the loss of market share, independent universities have increased overall credential production by 48% since 2000, mirroring the CSU system's growth in new credential production. Unlike the CSU system, however, the independent system experienced a drop in credentials issued in 2002-03; the CSU system had a 1% increase in production from 2001-02 to 2002-03, while the independent system had an 18% decline in credential production. National University, the largest independent producer of new credentials, experienced a 33% decline in new credential production from 2001-02 to 2002-03 and the second largest producer, Chapman University experienced a 22% decline in credential production. Although the independent universities demonstrated the capacity to react to market forces and began producing a significant number of the state's fully credentialed teachers in the early 1990s, these institutions also exhibit great sensitivity to economic changes that can result in large credential production fluctuations from one year to the next.

The smallest credential producer, the University of California (UC) system, increased its production of new credentials from approximately 790 credentials in 2000-01 to approximately 1,200 credentials in 2003-04. UC was the only teacher preparation system not to experience any decline in new credentials issued in 2002-03.

State funding of higher education can also affect teacher supply and demand. As state revenues declined during the economic downturn, spending on many teacher-related programs also fell. In 2004, higher education funding, for example, was cut as part of the "Higher Education Compact" agreed to by the Governor and UC and CSU systems. The compact guaranteed future funding stability in exchange for short-term budget cuts and long-term commitments, such as a new initiative to increase the number and quality of math and science teachers in the state.

As part of the compact, CSU agreed to increase fees for all students. Fees for teacher credential candidates increased by 20% for 2004-05 and by 8% for 2005-06. These changes could hamper enrollment in preparation programs or delay the completion of existing teacher candidates. Other implications for teacher preparation are unclear. The amount of money spent on teacher preparation is not determined by the CSU system, but rather by each individual campus.

⁷ Teachers trained in other states, other countries, or trained in district run intern programs are not included in these numbers.

A final issue to consider is the number of newly credentialed teachers who actually take a job in the state's public school system. Unfortunately, as has been the case since we began this work in 1998, data on the number of newly credentialed teachers who accept teaching positions in the state is not readily available. Analysis of the California Commission on Teacher Credentialing (CTC) and the California State Teachers' Retirement System (CalSTRS) data from 1991 through 2001 suggested that approximately 81% of newly credentialed teachers entered the teacher workforce before or within 1 year of receiving a credential, and an additional 2% took a job 1 to 2 years after earning their credential. Again, more precise data on the number of job-takers would significantly improve the state's ability to track the adequacy of the teacher supply.

Reentrants and Teachers from Out of State

Besides newly credentialed teachers, there are other sources of teachers to fill vacancies in California classrooms. One source is teachers who have taken a leave of absence and later return to the classroom. The reasons teachers choose to leave are many, including personal (to raise a family), professional (to pursue other career interests), or economic (to pursue higher paying occupations). The number of teachers reentering the workforce each year cannot be easily counted 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. An accurate count would not only allow for a better estimate of future supply, but might also give insight into why teachers leave, how long they are gone, and what influences them to return or not return. Those teachers who have not yet returned are potentially an untapped supply source that could be encouraged back to the classroom with the right blend of incentives. More information on this group is needed.

Individuals trained in other states who move to California to teach also add to the supply of fully credentialed teachers. Since 1998, a few state policies have been enacted to lower barriers and streamline the process for out-of-state trained teachers to receive full credentials in California [e.g. AB1620 (Scott), AB877 (Scott), AB3001 (Goldberg)]. These policies may be responsible for the increase in the number of out-of-state trained teachers receiving full credentials in California between 1999-2000 and 2001-02; out-of-state credentials increased from approximately 3,800 in 1999-2000 to over 5,600 in 2001-02.⁸ Since 2001-02, however, that number has declined and in 2003-04, just 3,575 out-of-state prepared teachers received full California credentials, fewer than in 1999-2000. Although there are no firm data on the decline in these types of teachers, California's soaring cost-of-living may be playing a role.

⁸This includes multiple-subject, single-subject, and education specialist credentials.

Conclusion

Despite progress made in the last few years in reducing the number of underprepared teachers in California, the state continues to face significant challenges as it seeks to supply enough teachers to meet the demand created by various demographic and policy factors. In the coming years the state will have to contend with large-scale teacher retirements and shifting demand patterns (moving toward a need for more secondary teachers and fewer elementary ones). A tenuous budget situation in Sacramento may impact the state's capacity to handle these unfolding events. Beyond just the sheer volume of teachers expected to depart the workforce and the heightened teacher quality requirements, however, policymakers must also contend with the loss of leadership, knowledge, and experience the retirees will take with them and the challenge of helping their replacements fill the void. With decreased state investment in recruitment and professional development programs and declining enrollments in teacher preparation programs, schools and districts, particularly chronically low-performing and hard-to-staff ones, will likely struggle to meet the needs of new faculty and their high-need student population. The state appears less prepared to manage the supply-demand crunch looming on the horizon than it was during the previous decade when it had the resources to recruit, prepare, place, and develop large numbers of teachers.

4. Filling the Gap Between Teacher Supply and Demand

Underprepared Teachers

- During the late 1990s and early 2000s, the number of teachers who were not fully credentialed increased dramatically, reaching a high point of over 42,000 in 2000-01. Since that time, the number of underprepared teachers has steadily dropped to around 20,000 in 2004-05, about 7% of the total teacher workforce.
- No Child Left Behind (NCLB) has prompted California to revisit its authorizations for teachers without full credentials. The emergency permit option will no longer be available as of July 2006, but the California Commission on Teacher Credentialing (CTC) will continue to issue other permits that are not compliant with NCLB in future years.
- The proportion of non-NCLB-compliant authorizations (e.g. emergency permits, waivers) held by underprepared teachers has shown a steady decline in recent years, from 83% of underprepared teachers in 2000-01 to 48% in 2004-05. There are still approximately 10,000 teachers holding emergency permits and other non-NCLB-compliant authorizations.
- The proportion of underprepared teachers holding NCLB-compliant authorizations (e.g. interns) has steadily risen from 11% to 44% between the years of 2000-01 to 2004-05.

Growth of Intern Programs

- The number of university intern credentials issued jumped from approximately 3,700 to about 6,200 between 2001-02 and 2003-04, an increase of 64%.
- The state issued 2,600 individualized intern certificates (IICs) in 2003-04, the year after this certificate was initiated. In November, 2005, following a lawsuit, a judge declared IICs to be void because the CTC failed to give public notice or opportunity to comment before authorizing the certificate, and ordered CTC to cease issuing them. Teachers holding IICs can no longer be counted as NCLB-compliant.

Underprepared Teachers in Different Subject Areas

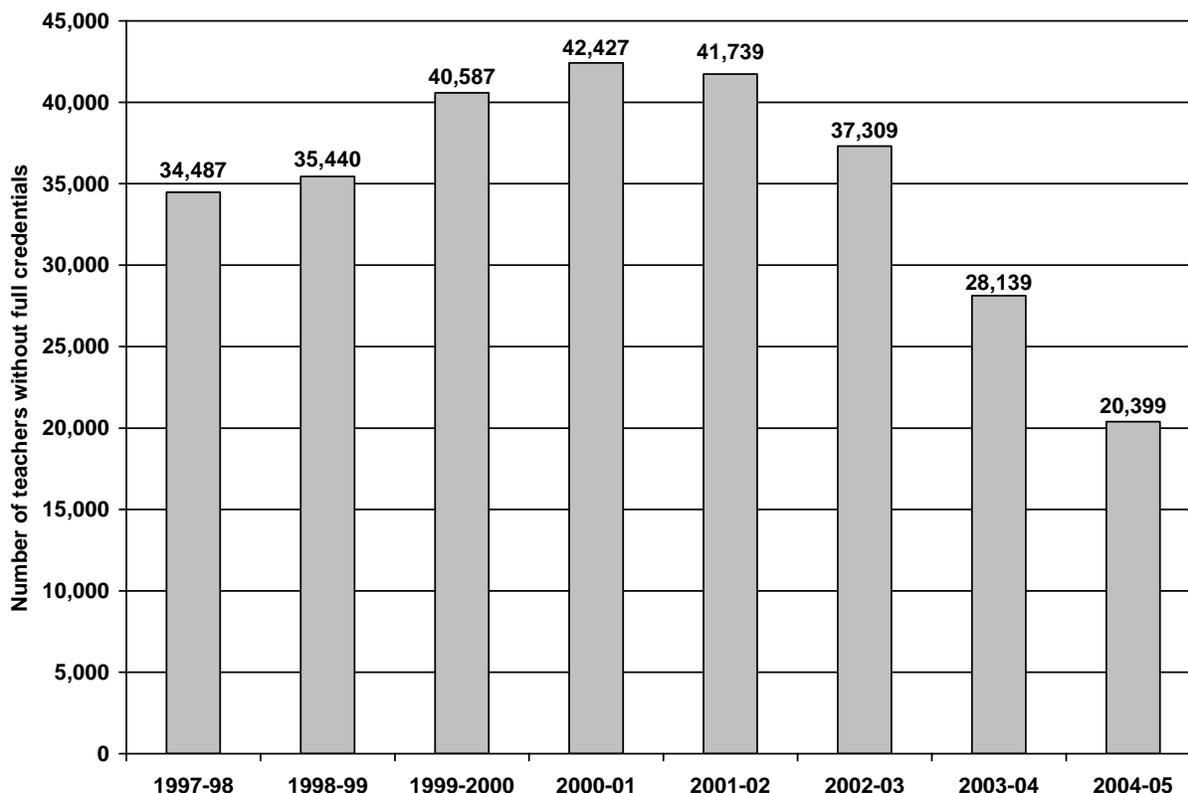
- The proportion of underprepared teachers in elementary and secondary education has decreased in recent years. The proportion of underprepared teachers in special education has also declined, but at a much slower rate. In 2004-05, 14% of all special education teachers were underprepared. Among *first-year* special education teachers, nearly half (49%) were underprepared.
- There are also disproportionate numbers of underprepared teachers in certain secondary subject areas, such as mathematics and the sciences, which have between 10% and 13% underprepared teachers.

In the previous chapter, we described the historical gap between the supply of and demand for fully credentialed teachers. When fully credentialed teachers are not available, classrooms do not sit empty. Instead, they are staffed with teachers who do not hold full credentials, or are underprepared. In this chapter, we explore this segment of the workforce. We begin by presenting data on the number of underprepared teachers over time. This is followed by an overview of the complex array of authorizations that underprepared teachers may hold, along with information about how these authorizations are changing as a result of NCLB. We next present data on how the pool of underprepared teachers in the workforce has shifted over time to include far more interns and fewer emergency permit teachers. Finally, we discuss how underprepared teachers are concentrated in certain subject areas, including special education, math, and science, and review how the state and districts are addressing this problem.

As described in Chapter 3, in the mid to late 1990s, California's dramatic increase in the demand for teachers outstripped the supply of fully credentialed teachers and overwhelmed the state's capacity to produce new ones. During these years and into the early 2000s, schools and districts struggled to find individuals to fill open positions. This situation created a skyrocketing number of teachers who were not fully credentialed. From 1997-98 to 2000-01, the number of underprepared teachers in the workforce increased by 23% (see Exhibit 11). By 2000-01, a record 42,427 underprepared teachers, 14% of the total teacher workforce, staffed California's classrooms.

Since that high point, however, the number of underprepared teachers has dropped substantially. Fiscal, policy, and demographic factors combined to create a reduced demand for teachers. At the same time, the production of newly-credentialed teachers was increasing. By 2004-05 (the most recent year for which data are available), underprepared teachers comprised only 7% of the total teacher workforce—the lowest percentage since the implementation of CSR. While this current figure represents a promising trend, California has yet to provide each student with a fully credentialed teacher. At last count, there were still over 20,000 underprepared teachers in the field (see Exhibit 11).

Exhibit 11
Number of Underprepared Teachers, 1997-98 to 2004-05



Sources: CDE (1998a, 1999a, 2000a, 2001a, 2002a, 2003b, 2004d, & 2005f); SRI analysis.

Note: Graph does not include years before 1997-98 because underprepared teachers were not identifiable until 1997-98. See Appendix B for additional information.

Authorizations for Underprepared Teachers

Underprepared teachers are a diverse group of individuals; among other things, they differ in the amount of teacher preparation they have completed and the particular authorization they hold. Even before the teacher shortage of the late 1990s, the state had a variety of authorizations that permitted individuals to teach without having fully completed their teacher preparation requirements. With the implementation of NCLB, however, the state has had to revisit its policies and address those that are in conflict with the federal law. For example, the CTC and the legislature have been engaged in parallel efforts to eliminate the emergency permit option, which authorizes teachers who have not demonstrated subject-matter competency. The emergency permit option will no longer be available as of July 2006.

The state has yet to fully align with the federal legislation. As we describe below, there are still approximately 10,000 teachers holding emergency permits and other non-NCLB-compliant authorizations. Even once the emergency permit has been eliminated, there will continue to be teachers who are not compliant with NCLB in future years. When the CTC first attempted to

eliminate emergency permits in 2003, ahead of the NCLB timeline, it faced heavy opposition from districts that wanted an option for hiring non-NCLB-compliant teachers in emergencies. In a compromise, the CTC created two new options that are non-NCLB-compliant: the Short-Term Staff Permit and the Provisional Intern Permit. The Short-Term Staff Permit is intended for unforeseen hires (e.g., those necessitated by a regular staff member’s illness or last-minute enrollment adjustments). The permit can also be used as a “bridge document for those who have completed subject-matter competency but are unable to enroll in a teacher preparation program” (CTC, 2005i). The Provisional Internship Permit is intended for anticipated staff openings that cannot be filled despite a “diligent search” for a credentialed candidate (CTC, 2005i).

The candidate requirements for this permit are similar to those for the Short Term Staff Permit, but because the Provisional Internship Permit is intended for longer-term employees, it places higher expectations on the hiring district and the candidate to demonstrate progress towards an intern credential. Exhibits 12 and 13 provide details on all NCLB-compliant and non-NCLB-compliant authorizations for underprepared teachers.

Exhibit 12
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 	Strong growth since 1995-96. 6,197 in 2003-04
District intern credential	<ul style="list-style-type: none"> • For enrollees of district-based teacher education programs • Prerequisite: subject-matter competency • Most commonly found in large, hard-to-staff districts • Valid for 2 years, renewable for 1 additional year 	Strong growth until 1998-99, flat from then to 2003-04 (about 900 per year)
Early Completion Internship (2001)	<ul style="list-style-type: none"> • Option of bypassing teacher education coursework by passing the Foundations of Teaching assessment • Required completion of TPA or other fieldwork assessment 	400 recently took the test and pass scores are not yet available

Sources: CTC (1999a, 1999b, 2002b, 2002c, 2003b, 2004b, 2004d, 2004e, 2004f, 2004g, 2005a, 2005b, 2005c).

Notes: All numbers are credentials/permits/certificates issued by CTC. These numbers include first-time, new-type multiple-subject, single-subject, and special education credentials.

Exhibit 13
Non-NCLB-Compliant 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. 10,242 in 2003-04. CTC phasing out the permits by June 30, 2006
Individualized Internship Certificate (IIC)/ Special Temporary Certificate (STC) (2002)	<ul style="list-style-type: none"> • Targeted at emergency permit holders who are subject-matter competent but not enrolled in an intern program • Required enrollment in a university-based preparatory program and the development/signing of an individualized plan to acquire the credential • IIC void as of November 2005, will likely be replaced with Special Temporary Certificates (STC) • STCs are valid for 1 year and non-renewable 	About 2,600 IIC's issued in 2003-04
Pre-internship	<ul style="list-style-type: none"> • Teachers have not demonstrated subject-matter competency • Teachers participate in 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 	About 540 participants in 2004-05. No new pre-intern credentials issued in 2004-05
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 	Declining steadily since 1999-2000, from about 2,700 to about 450 in 2003-04
Provisional Internship Permit	<ul style="list-style-type: none"> • Used for anticipated hires when a credentialed teacher cannot be found • Requires a BA and 40 units in subject matter for a multiple-subject permit and 18 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 	Newly available
Short-term Staff Permit	<ul style="list-style-type: none"> • The short-term permit applies to unanticipated hires • BA and 40 units subject-matter for a multiple-subject permit 18 for a single-subject permit are required • Valid for 1 year, nonrenewable 	Newly available

Sources: CTC (2003d, 2004b, 2004c, 2004d, 2004f, 2005c, 2005d).

Notes: All numbers are credentials/permits/certificates issued by CTC except for the pre-intern numbers which are the number of participants in pre-intern programs. All numbers include first-time, new-type multiple-subject, single-subject, and special education credentials.

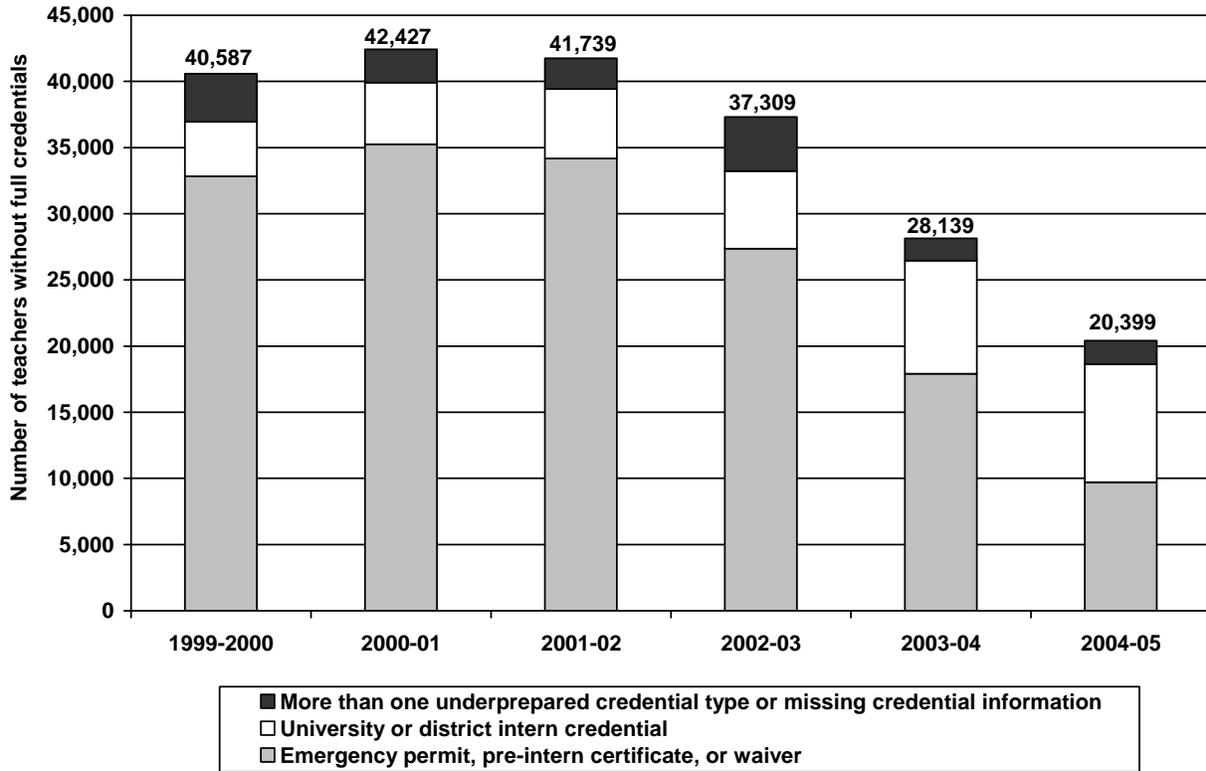
Changes to Underprepared Teacher Pool

NCLB and the subsequent shifts in state policy have led to changes in the hiring policies and practices of local districts. These changes, along with overall labor market changes, have led to a significant decline in the number of underprepared teachers hired in California, as described above, as well as a shift in the types of credentials and permits held by underprepared teachers. Those authorizations that are not compliant with NCLB have shown a steep decline in number. In 2000-01, 83% of underprepared teachers reported teaching on emergency permits, pre-intern certificates, or waivers—all non-compliant options. By 2004-05 fewer than half (48%) of all underprepared teachers reported teaching under these authorizations (see Exhibit 14). The approximately 10,000 noncompliant teachers that still remain in the workforce have an average of 4.2 years of teaching experience, indicating that many of these individuals may have renewed their emergency permits for multiple years. (Until 2006, emergency permits can be renewed annually, up to four times.)

During this same time period, the proportion of underprepared teachers holding NCLB-compliant authorizations has sharply risen. In 2000-01 just 11% of underprepared teachers were interns; by 2004-05, 44% were interns.¹

¹ Percentages NCLB-compliant and non-NCLB-compliant authorizations for a given year do not add up to 100% because there are some teachers who hold both types of authorizations (see Exhibit 4).

Exhibit 14
Number of Underprepared Teachers, by Credential Type, 1999-00 to 2004-05



Sources: CDE (1998b, 1999b, 2000b1, 2001a, 2002b1, 2003c1, 2004e1, & 2005g); SRI analysis.

Note: See Appendix B for additional information.

Growth of Intern Programs

As the intern route has become the increasingly favored alternative path to certification, state funding for intern programs has grown. As a result of state budget surpluses in the late 1990s and an increasing awareness of the state's teacher shortage, California's investment in intern programs grew from \$2.0 million in 1996-97 to a \$31.8 million in 2001-02. In the years since, funding for intern programs has fluctuated somewhat; the allocation for 2005-06 is \$24.9 million (see Exhibit 15).

Exhibit 15
Number of Internship Programs and Program Funding, 1994-95 to 2004-05

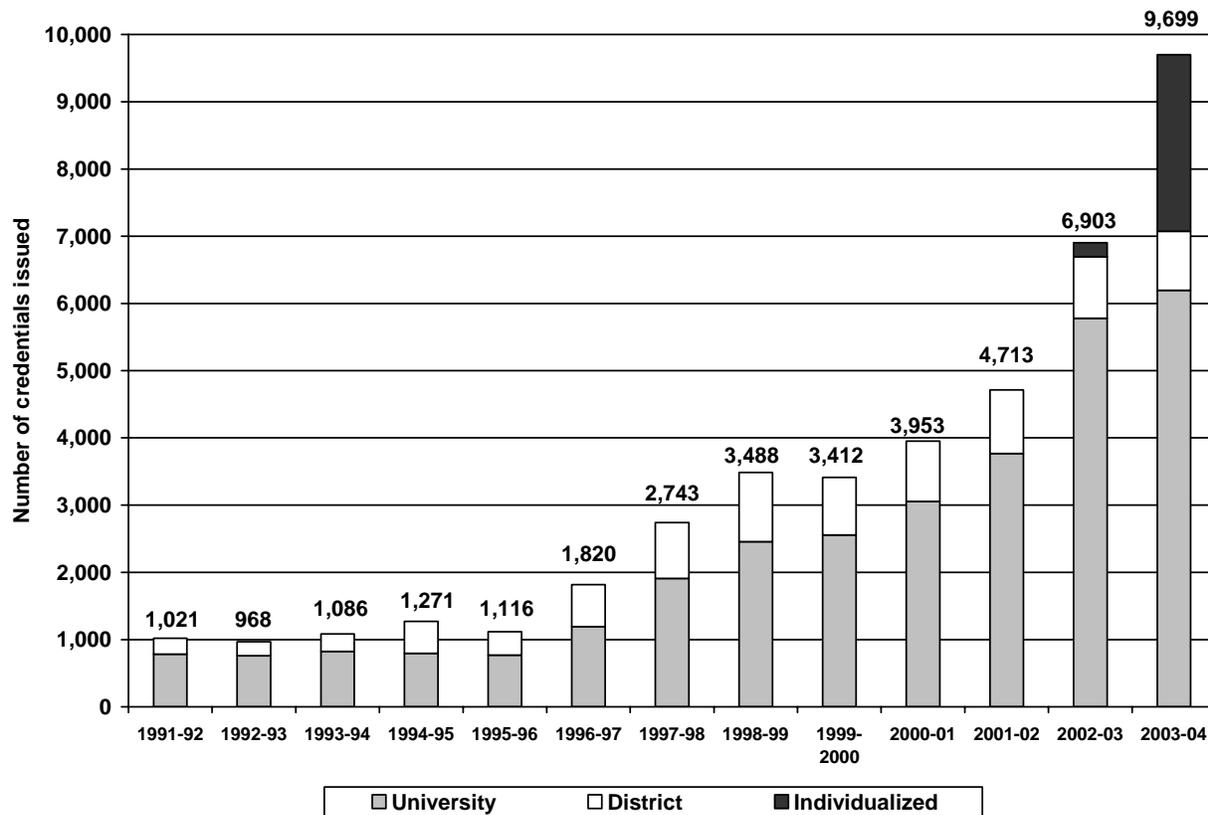
Fiscal Year	Number of Funded Programs	Number of Districts Involved^a	Funding (in millions)
1994-95	29	150	\$2.0
1995-96	23	178	\$2.0
1996-97	23	186	\$2.0
1997-98	52	271	\$4.5
1998-99	58	330	\$6.5
1999-2000	65	408	\$11.0
2000-01	75	465	\$21.5
2001-02	81	594	\$31.8
2002-03	79	762	\$18.8
2003-04	77	800	\$22.5
2004-05	72	842	\$20.8
2005-06	74	842	\$24.9

^a In any given year there may be more districts with signed agreements to house intern programs than there are programs in operation.

Sources: CTC (2001c, 2001d, 2003d, 2004b, 2005c).

According to the most recent CTC data, the number of university intern credentials issued jumped from approximately 3,700 to about 6,200 between 2001-02 and 2003-04, an increase of 64% (see Exhibit 16). Enrollment in university intern programs dropped slightly in 2004-05 for the first time in several years, an indication that intern program growth may finally be tapering off (data not shown).

Exhibit 16
New University, District, and Individualized Intern Credentials Issued, 1991-92 to 2003-04



Sources: CTC (1999a, 1999b, 2002b, 2005a, & 2005b).

Individualized intern certificates (IICs) jumped to 2,600 in 2003-04, the year after this option was created. The IIC was designed for emergency permit holders who have already demonstrated subject-matter competence and requires an agreement between the intern, their employing district, and a sponsoring university that outlines an individualized plan for completing teacher preparation. Although it was originally designed to add more structure and support to the preparation paths of emergency teachers, it has been argued that the IIC does not guarantee participants the structure and support commonly offered through a university or district intern program.

In November, 2005, following a lawsuit, a judge declared IICs to be defective because the CTC failed to give public notice or opportunity to comment before authorizing the certificate. The ruling declared that IICs are void and ordered CTC to cease issuing them. In December, the CTC plans to implement an emergency regulation to replace each IIC with a Special Temporary Certificate (STC), a one-time, nonrenewable certificate. Teachers holding IICs/STCs will remain in the classroom but are not considered highly qualified under NCLB. All state and local reports on NCLB compliance will be revised to reflect this change. The commission may reinstate IICs in the future following a public hearing and approval by the Office of Administrative Law.

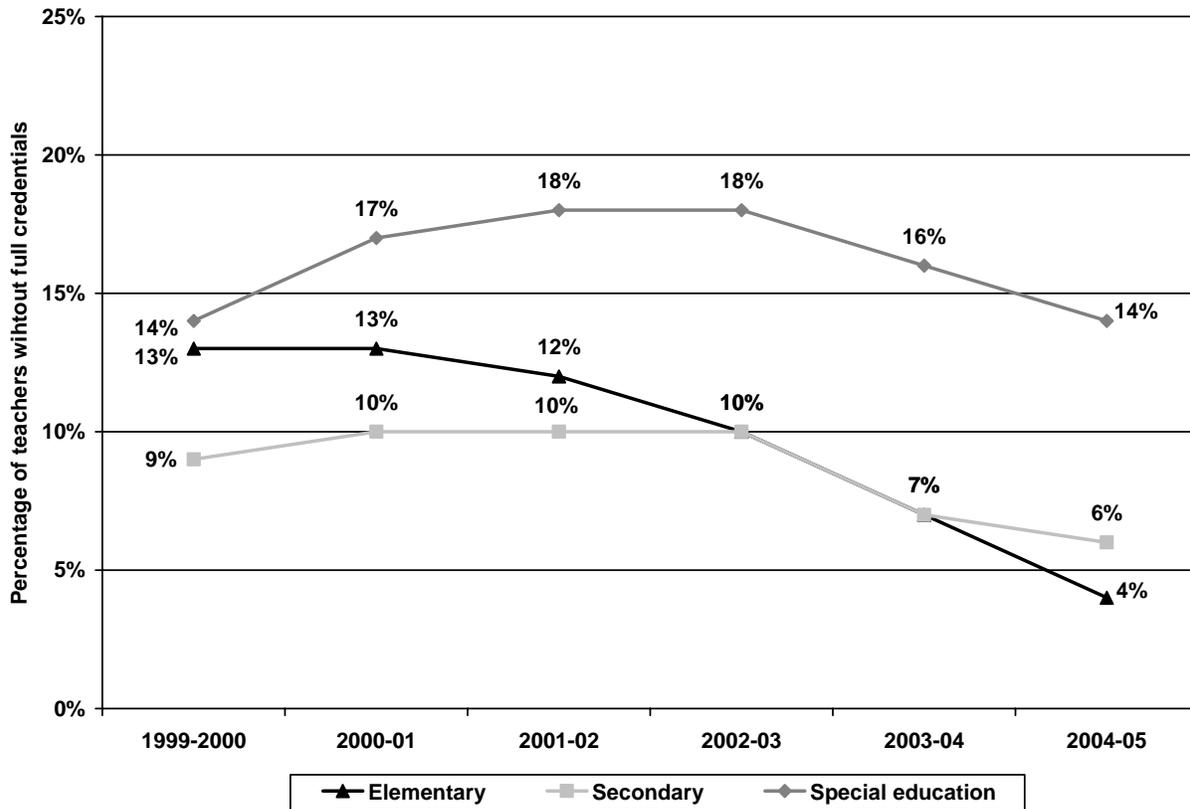
Attorneys for the plaintiff, however, have indicated that if IICs are reinstated and counted as highly qualified under NCLB, they may file another lawsuit (CTC, 2005e; Egelko, 2005).

Aside from the dispute over the IIC option, California is facing a broader question with respect to alternative certification: are intern programs an appropriate long-term approach to staffing our schools? In California, intern programs were created to (1) expand the pool of qualified teachers by attracting persons into teaching who might not otherwise enter the classroom, and attract those who bring valuable and experiences into teaching; (2) enable K-12 schools to respond immediately to pressing needs; and (3) to provide a professional preparation program that is as extensive and systematic as traditional programs, including effective supervision and intensive support (CTC, 2005k). Recent national research (Humphrey & Wechsler, 2005) has concluded that there is a great deal of variation between and within alternative certification programs, and that their overall quality is a function of the interaction between the program as implemented, the school context in which participants are placed, and the participants' backgrounds and previous teaching experiences. Our case study work from previous years (Shields, et al., 2003) similarly indicates that intern programs in California vary greatly along several dimensions, including the quality of coursework, the quality of supervision and opportunity to learn during the student teaching experience, and the quality of on-the-job support, including mentorship. As the retirement rate increases in future years, the intern route is likely to grow, particularly because it is an alternative route that is sanctioned by the federal government under NCLB. As the intern route becomes further institutionalized as an acceptable preparation path, more in-depth research will be needed to assess its quality and impact on the workforce.

Underprepared Teachers in Different Subject Areas

In previous years, there were a great deal of underprepared elementary teachers—13% at the height of the teacher shortage in 2000. As overall workforce numbers have improved, both elementary and secondary education have benefited. In 2004-05, only 4% of elementary teachers and 6% of secondary teachers were underprepared (see Exhibit 17). The proportion of underprepared teachers in special education has also declined, but at a much slower rate. In 2004-05, 14% of all special education teachers were underprepared. Special education teachers also disproportionately hold emergency permits, pre-intern certificates, or waivers (a subset of the underprepared pool that is not in compliance with the requirements of NCLB). Special educators account for only about 9% of the total teaching population (CDE, 2005r), but hold 18% of the noncompliant authorizations in the state.

Exhibit 17
Percentage of Underprepared Teachers, by Type of Authorization,
1999-2000 to 2004-05



Sources: CDE (2000b1, 2001b1, 2002b1, 2003c1, 2004e1, & 2005g); SRI analysis.

Note: See Appendix B for additional information.

Among first-year special education teachers in 2004-05, the numbers look far worse: nearly half (49%) do not hold full credentials, compared to only 14% in elementary education, and 28% in secondary education.

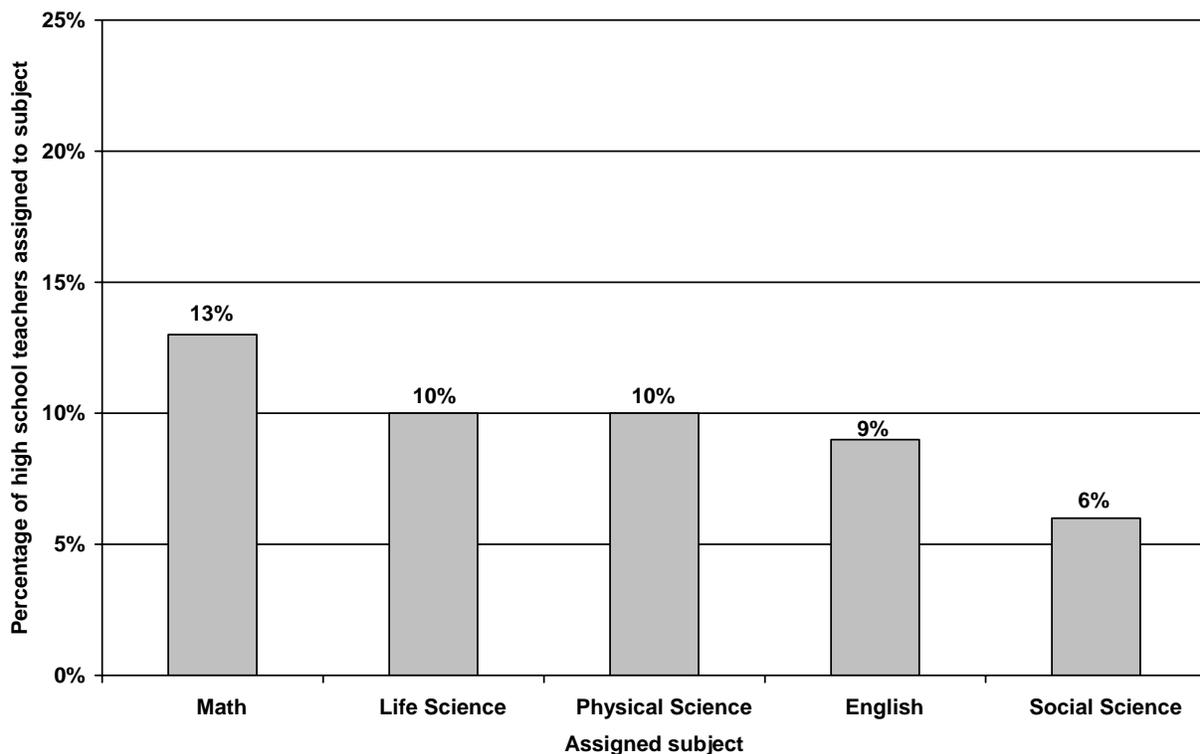
Across the state, districts of all sizes and types continue to struggle to find fully credentialed special education teachers. Even in districts with few staffing problems, the problem is so ubiquitous that some administrators seem to accept it as a normal condition that is beyond their control. One principal in a small urban district told us that she never has trouble finding credentialed teachers, but when asked specifically about special education teachers, said, “Most of [the special education teachers] are working on something. They are going to school for their training. They are not usually coming to us with the special ed credential in hand.”

In some places, the shortage of special education teachers is acute. At one suburban high school, for example, the special education department hired three new teachers this year and two new teachers last year, all of whom held emergency permits or were interns. (There are a total of seven teachers in the department.) According to the special education chair, the school looks for

teachers who are well-equipped for the job and have experience working with difficult students, but has trouble finding the right people. “There are not a lot of candidates, so you take what you can get. My own belief is that special ed kids have been shortchanged. We need the best teachers. They deserve the best. It is important to have people who are enthusiastic about teaching our kids.” The district’s Professional Development Director was more blunt about the teachers’ lack of training and experience, saying, “They don’t know much about teaching, much less special ed.”

In addition to problems in special education, there are also disproportionate numbers of underprepared teachers in certain secondary subject areas. Math and science have long been identified as shortage areas, and continue to be problematic with between 10% and 13% underprepared teachers (see Exhibit 18). English teacher shortages are nearly comparable to those in science, with 9% underprepared teachers. Social science has 6% underprepared teachers. Note that these data capture only those teachers in each subject area who do not hold a full credential. It does not include those who are fully credentialed but teaching out of field. (See chapter 5 for information on out-of-field teaching.)

Exhibit 18
Percentage of Underprepared High School Teachers in Assigned Subject, 2004-05



Sources: CDE (2005g & 2005j); SRI analysis.

Note: These percentages indicate the number of teachers who are assigned to particular subject areas and should not be compared with the percentages in Exhibit 17, which indicate the number authorized to teach in particular subject areas. See Appendix B for additional information.

At the state level, policy-makers have taken note of the need for more teachers specifically in the areas of math and science. As part of the Higher Education Compact, the UC and CSU systems have committed to collaborating on a new initiative to prepare more teachers in those subjects. Both systems have committed to increasing their annual production of credentialed science and math teachers. The state budget allots \$750,000 for UC (a similar amount will be matched by the university) to establish six Science and Math Resource Centers that will provide student advising, school placement, and other related services. The budget also includes \$250,000 to CSU, (again, an amount to be matched by the university), to develop “blended” credential programs that culminate in an undergraduate math or science major and a teaching credential (CDOF, 2005).

Additionally, the state has a longstanding program that forgives education loans for teachers who commit to teaching in certain specified shortage subject areas and regions. The Assumption Program of Loans for Education (APLE) assumes an additional \$1,000 of loans per year for participants who teach math, science, or special education. Participants meeting this requirement who teach in a school ranked in the lowest two deciles of the Academic Performance Index (API) can receive an additional \$1,000 per year. For 2005-06, 300 additional APLE awards will be available for teachers who participate in the new Science and Math Teacher Initiative.

At the local level, options for addressing subject area shortages are somewhat limited. Traditionally, teachers have been compensated based on their years of experience and educational achievements, not what subject or what kind of student they are teaching. Despite this long-held practice, a few places are experimenting with offering minor incentives to teachers in high-need areas. For example, one small rural district offers year-for-year service credit to math, science, and special education teachers who transfer in from other districts. In other words, a veteran math teacher with 20 years of teaching experience in another public school would be placed at the 20-year level on the salary schedule. For all other assignments, the district gives a maximum of 7 years of service credit. The policy does appear to attract at least a few teachers who would otherwise not be there.

Districts have also utilized state funds to attract teachers for difficult-to-staff assignments. For example, one small urban district began using state Teaching as a Priority (TAP) program money a few years ago to offer \$2,000 signing bonuses and up to \$3,000 in relocation costs to teachers in math, science, and special education. When TAP funding ended, the district decided these efforts were important enough to find funding for them elsewhere. They now divert Title II funds to keep these recruitment efforts going.

Finally, some districts simply employ more aggressive recruiting tactics when looking for candidates in hard-to-staff subject areas. One district holds its own job fair to recruit teachers and authorizes its principals to interview candidates and offer contingency contracts on the spot for open positions in high-need areas such as math, science, and special education.

Conclusion

Clearly, the state is making progress toward the goal of having more teachers meet the definition of “highly qualified” under NCLB. Whether the changes resulting from the federal legislation will ultimately result in a more capable teacher workforce remains to be seen. In the meanwhile, California must grapple with moving the remaining 10,000 noncompliant teachers into compliance, and addressing the ongoing shortage of teachers in certain subject areas. Furthermore, there are other issues of teacher preparedness to be addressed, such as whether the state’s fully credentialed teachers are adequately prepared for their particular assignments. We turn to this issue next, in Chapter 5.

5. Inadequate Preparation for Specific Teaching Assignments

Teachers Who Are Not Prepared to Teach English Learners

- In California, teachers with one or more English learners (ELs) in their classroom must have the proper authorization and training to teach them.
- In 2004-05, fewer than half (48%) of all fully credentialed veteran teachers (with more than 5 years of teaching experience) had an EL authorization. Some case study districts have been slow to move all veteran teachers into compliance.
- Recently, the *Williams v. California* settlement has focused increased attention on the EL authorization, and has led to some changes in the state's process of monitoring and reporting on EL misassignments.

Out-of-Field Teachers

- Out-of-field teachers are those who hold a full credential in some subject area, but do not have the proper credential for at least one of the other subjects they are teaching. Out-of-field teaching is primarily an issue at the secondary level.
- Though most schools have relatively few out-of-field teachers, the number of students affected across the state is quite significant. In math, 12% of high school teachers are out of field, affecting approximately 91,000 students. In English, 15% of teachers are out of field, affecting a total of 149,000 students.
- Out-of-field teaching appears to result largely from scheduling problems and districts' attempts to find economy-minded staffing solutions.
- Despite the state's longstanding process for monitoring out-of-field teaching and districts' various efforts to avoid it, the problem has persisted for many years. NCLB and *Williams*-related legislation are applying new pressure on districts to see that all teachers are appropriately credentialed for their assignments.

Novice Teachers in Challenging Assignments

- The practice of giving challenging assignments to new teachers is widespread, including multiple preps, large class sizes, students with significant academic or behavioral challenges, or all introductory or remedial classes. Case study data indicate that secondary schools struggle more with inappropriate assignments than elementary schools.
- A number of factors contribute to inappropriate assignments, including school culture and leadership, and in some cases, policies outlined in districts' bargaining agreements.
- A few bargaining agreements have limited provisions to protect all or new teachers from unreasonable assignments.

The previous chapter focused on underprepared teachers, those who do not hold full credentials. There are also teachers with full credentials who are otherwise not adequately prepared for their assignment. These are teachers who are not prepared to teach English learners (ELs), yet have ELs in their classroom and teachers who are “out-of-field,” (who hold a full credential, but not in their assigned subject area). We also discuss novice teachers, teachers who are in their first or second year of teaching and who sometimes are given overly challenging or inappropriate assignments

We describe these groups in the following three sections, in each case presenting data on the number of teachers in each group, the factors that lead to teachers being given assignments for which they are inadequately prepared, and how federal, state, and/or local policy is addressing the problem.

Teachers Who Are Not Prepared to Teach English Learners

There are nearly 1.6 million English learners in California, a number that has increased by 26% between 1995 and 2005. These students are taught in a variety of instructional settings (see Appendix D for more detailed information on EL instructional settings and certification). In a 2003 survey, 87% of California teachers reported having English learners in their classroom. At the same time, only 47% of those teachers reported being certified to teach ELs, and only 40% reported having adequate training related to second language acquisition (Shields, et al., 2003).

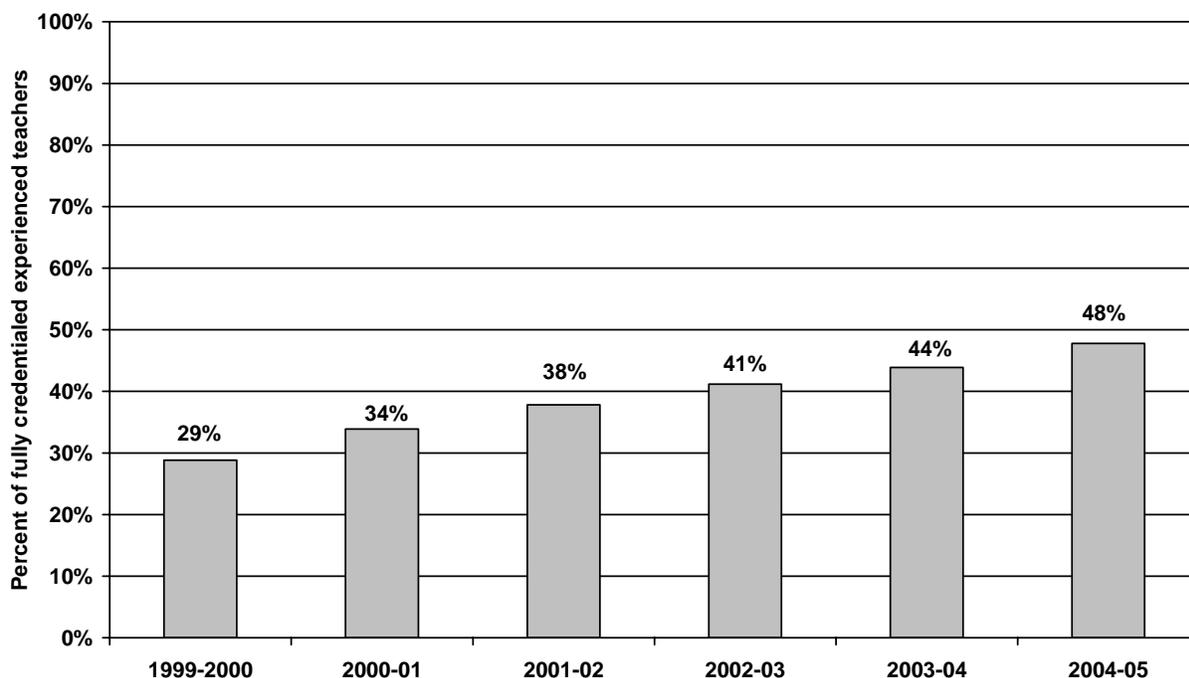
As the California Commission on Teacher Credentialing recently reiterated, teachers with *one or more* English learners in their classroom must have the proper authorization and training to teach them (CTC, 2005f). New teachers acquire EL certification as part of their regular credential. In 2002, AB 1059 (Ducheny) required all teacher preparation programs to implement a new English learner standard, which requires preparation programs to provide every teacher candidate with a diverse set of experiences and skills, including language acquisition for students, linguistic development, practicum with ELs, and interpretation of EL assessments among others. Despite the state’s efforts to embed EL training into every teacher’s preparation program, there is some evidence that newly credentialed teachers are unaware or unaffected by this training. In 2004-05, only 34% of first- and second-year teachers reported to CDE that they are EL certified (CDE, 2005g).

Veteran teachers who earned their credential before 2002 had the option to acquire an EL authorization alongside their regular teaching credential, either a Cross-Cultural, Language, and Academic Development (CLAD) Certificate or a Bilingual Cross-Cultural, Language, and Academic Development (BCLAD) Certificate.¹ (Older veteran teachers may also have acquired other types of EL certifications that are no longer issued—these are still considered proper authorizations to teach ELs.) Those veterans who never acquired an EL certification can do so by

¹ CLAD was designed for teachers to provide English Language Development (ELD) instruction or to use Specially Designed Academic Instruction in English (SDAIE) techniques. BCLAD was designed for teachers delivering content in students’ primary language, in addition to ELD and SDAIE.

completing a 45-hour training that leads to a Certificate of Completion of Staff Development, or by passing the new California Teachers of English Learners (CTEL) examination (CTC, 2005h). Recent data show that many veteran teachers have yet to acquire an EL certification, even though many of them are certain to have at least one EL student in their class(es). In 2004-05, fewer than half (48%) of all fully credentialed teachers with more than 5 years of teaching experience had an EL authorization (see Exhibit 19). The state has realized progress in this area, however, with the percentage of this group having increased from 29% in 1999-2000.

Exhibit 19
Percentage of Fully Credentialed Experienced Teachers with EL Authorization,
1999-2000 to 2004-05



Sources: CDE (2000b2, 2001b2, 2002b2, 2003c2, 2004e2, & 2005g); SRI analysis.

Note: “Experienced” teachers are those with more than 5 years of teaching experience. See Appendix B for more information.

Despite overall progress in the state, our case studies show that in some places, moving experienced teachers into compliance with EL certification requirements is a slow process. In some instances teachers have resisted because they are not interested in investing their time in this form of professional development or they are trying to avoid being assigned classes with ELs. One EL social studies teacher, for example, said that some teachers prefer not to teach EL students and so have little incentive to participate in training: “There may be some that take [those more challenging assignments], but most say ‘not me.’ ” Teachers may hold these attitudes because they feel ill-equipped to handle the challenges of instructing EL students, or

doubt the adequacy of the 45-hour training to help them do so. Compounding some teachers' lack of interest in acquiring EL certification is that their district will not pay to send teachers to EL professional development; two such case study districts cited tight budgets as the reason.

For both new teachers and veterans, the quality of available EL training is an important question. Given the ever-growing student diversity in the state, California's requirement to have all teachers receive EL training makes good sense; however, it is not clear what preparatory rigor was lost by embedding the EL content into existing preparation programs. Now that the EL requirement is not a stand-alone program, preparation programs must be especially attentive to ensuring high-quality EL content throughout the program. This raises the question of whether individual professors have the capacity to deliver strong instruction on teaching ELs, and whether there are enough mechanisms in place for monitoring and ensuring quality. For veteran teachers, the question is whether a 45-hour training can adequately prepare them for the instructional challenges they face in the classroom.

Approaches to the Problem

There are both state and local approaches to the issue of ensuring teachers are appropriately authorized to teach ELs. We discuss each in turn.

State Approaches

In addition to licensure policies, the state has long had a system for monitoring whether teachers of ELs have the appropriate authorization. Counties have had to report annually on teacher misassignments in ESL and bilingual classes (along with misassignments in other subject areas) for one-quarter of their districts. Recently, the *Williams v. California* settlement has focused increased attention on the EL authorization, which has led to some changes in the state's monitoring and reporting activities. As a result of *Williams*, schools have to report the number of EL teacher misassignments on their annual School Accountability Report Cards (SARCs). In addition, county superintendents now must report annually for all schools in Academic Performance Index (API) deciles 1–3 the number of teachers who have 20% or more ELs in their classroom, and whether the teachers of those classes do or do not hold a proper EL certification (CTC, 2005f). (See Exhibit 20 for an overview of state credentialing and reporting requirements for teachers of ELs.)

Our case studies indicate that the new 20% reporting standard has caused some confusion among local administrators. Some have interpreted 20% to be the threshold for establishing a misassignment; in fact, any class with *one or more* EL students is considered a misassignment by the state. By establishing the 20% standard, the legislation related to *Williams* has merely focused increased attention on those classes with the highest concentration of ELs.

Exhibit 20
Requirements for Teachers of English Learners

Requirement	If one or more of the students in a class needs English learner (EL) services, the teacher providing the EL services must hold an appropriate EL authorization or be actively participating in professional development leading toward a Certificate of Completion of Staff Development.
Authorization	New teachers acquire EL authorization as part of their regular credential. Veteran teachers may have acquired EL authorization alongside their initial credential (e.g. CLAD or BCLAD). Those who did not may participate in professional development to receive a Certificate of Completion of Staff Development or take the CTEL exam.
Reporting	<ul style="list-style-type: none"> • All schools must report annually on the SARC the total number of misassignments of teachers of English learners. • County Offices must report annually to the CTC misassignments in one-quarter of all districts in each county, including misassignments of teachers in ESL or bilingual settings. • County Offices have an additional reporting requirement to annually report misassignments of teachers in classes with 20% or more ELs for all schools in API deciles 1–3.

Source: CTC (2005f).

Any time an EL misassignment is found, it must be reported to the district superintendent and corrected within 30 days of notification. If it is not, a series of corrective actions involving the state begin (CTC, 2005f) (see Exhibit 21). It is unclear how effective this process is in correcting EL misassignments quickly; the sanctions appear fairly vague and could take a considerable amount of time to be enacted. Furthermore, it is unclear that districts and counties have the funding and capacity to correct misassignments by providing teachers with the training needed to acquired EL authorization. We turn to this point next.

Exhibit 21
Steps to Correcting an English Learner Misassignment

<ol style="list-style-type: none"> 1. EL misassignment is uncovered by the County Office. 2. The district superintendent is notified of the misassignment. 3. The district must correct the misassignment within 30 days of notification. 4. If the misassignment is not corrected, it must be reported to CTC. 5. CTC contacts the district superintendent regarding the misassignment. 6. The district has another 30 days to correct the misassignment. 7. If the misassignment is not corrected, the Committee on Authorized Assignments determines whether more severe sanctions are appropriate. In appropriate cases, the Committee identifies the individuals responsible for the misassignment. 8. Findings are reported in writing to the Committee of Credentials for further investigation and consideration of adverse actions.
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Source: CTC (2005f).

District Approaches

It is not clear how successful schools and districts have been in meeting the new requirements for EL authorization. The first county superintendents' reports were due to the state July 1, 2005, but have not yet been released publicly by CTC. Our case studies indicate that the monitoring requirements adopted as a result of the *Williams* case have spurred some districts into action. Some districts are paying for veteran teachers to obtain proper certification. A small rural district, for example offers training through the local County Office of Education and reimburses teachers who take the exam to meet the EL certification requirement. Another rural district is using Title II funds to pay for teachers to attend county trainings. Bargaining agreements between districts and local teachers unions may also address the issue of EL training. For instance, one large urban district reimburses teachers for EL certification exam fees if teachers participate in a district training program and are assigned to teach in a program for ELs. Similarly, another large urban district offers stipends or salary credit to teachers who complete approved training and teach ELs; the district also pays the cost of CLAD and BCLAD exams and certificates once a teacher completes an approved program.

Districts that do not pay for training and/or exams may be having more difficulty bringing their veteran teachers into compliance, and their options for dealing with recalcitrant teachers are unclear. Some district administrators reported that they have little if any leverage to require teachers to obtain EL certification once they achieve permanent status. One district reports trying to solve the problem through teacher turnover by no longer hiring any teacher without EL certification—a slow approach to the problem that may take years to complete.

Clearly California has much room for improvement in preparing its teachers to teach the state's significant population of ELs. Many veteran teachers of ELs are not certified for their positions, and there are few effective policy levers in place to correct the problem. Compounding the problem is the confusion among local administrators about which teachers require an EL certification. Furthermore, there are questions about the adequacy of the state's minimum requirements for EL certification. Further investigation will be needed to determine if today's teacher credential candidates are indeed receiving high-quality training, embedded throughout their coursework, on how to work with ELs.

Out-of-Field Teachers

Out-of-field teachers are those who hold a full credential in some subject area, but do not have the proper credential for one or more of the particular 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. For example, 12% of high school math teachers (nearly 1,400) were fully credentialed,² but not in math (see Exhibit 22). In 2004-05, approximately 91,000 students, or 6% of all high school students taking math, were taught by an out-of-field math teacher. In English, 15% (nearly 2,500) of teachers were teaching out of field. A total of 149,000 students were taught by an out-of-field English teacher, or 8% of all high school students enrolled in an English course.

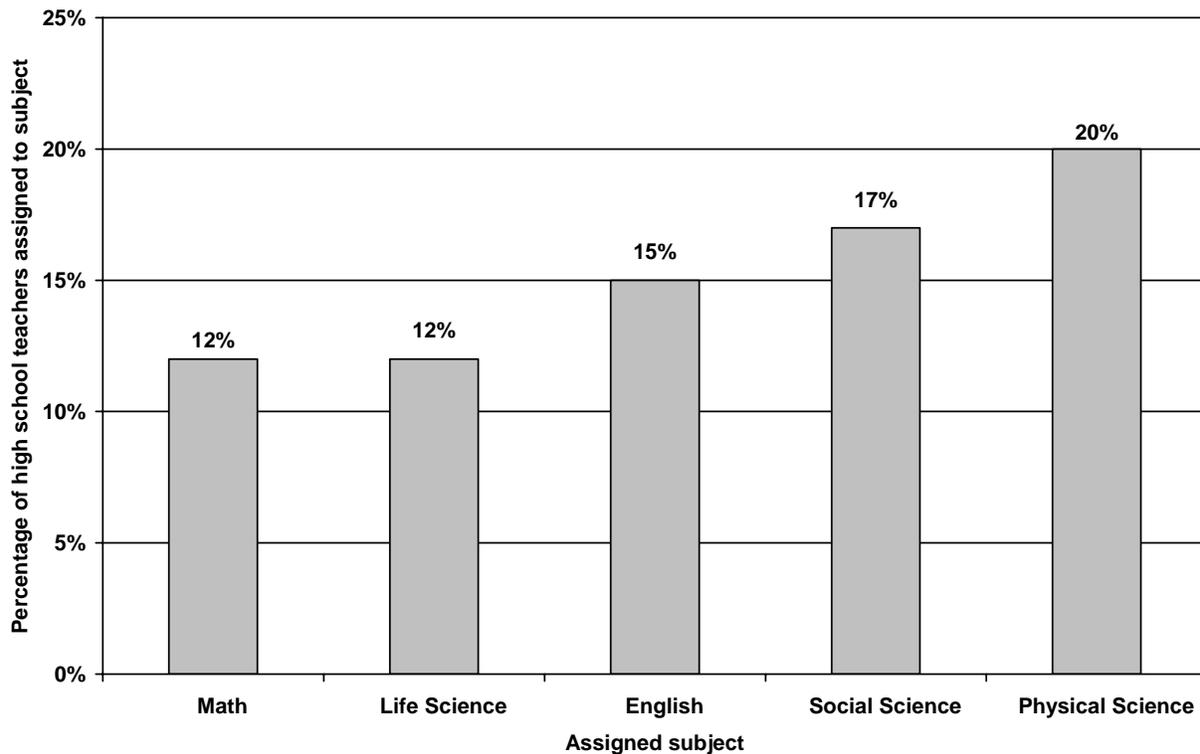
The most recent CTC report on misassignments had similar findings, as well as some additional information.³ The 2003 report covered the years 1999-2003, inclusive, and found that 5.2% of all secondary teachers were misassigned. In the four core academic areas, there were also large numbers of misassigned teachers: English (14.6%); mathematics (12.4%); science (11.9%); and social science (10.5%) (CTC, 2004h). (See below for more information on CTC's process for monitoring and reporting misassignments.)

Case studies revealed that out-of-field assignments typically arise as a result of scheduling problems and limited budgets, not necessarily teacher shortages. Indeed, as we will describe in the next chapter, out-of-field teachers are found in most California high schools, not just those with chronic staffing problems. High school administrators reported that they are commonly faced with a staffing dilemma when devising their master schedules. Frequently there is a need to staff an additional one or two classes in a particular subject, yet it does not make fiscal sense to hire another full-time teacher to cover one class, and finding a part-time, appropriately credentialed teacher is improbable. Delays in finalizing the budget and processing transfers may also aggravate the problem: if districts are delayed in identifying their precise hiring needs, they may scramble at the end to find a teacher with the right credentials (see Chapter 6 for more on this topic).

² Math teachers are defined as teachers who teach at least one math course. Teachers in other subject areas are defined the same way.

³ The CTC report drew from county superintendent monitoring reports, whereas our analysis is derived from assignment and credential information collected by CDE.

Exhibit 22
Percentage of Out-of-Field High School Teachers in Core Subjects, 2004-05



Sources: CDE (2005g & 2005j); SRI analysis.

Note: See Appendix B for more information.

Because science credentials are offered in subject-specific areas (e.g. chemistry, biology), the sciences can be especially challenging assignments for schools to fill. At some high schools, there is no a need for five (or ten) sections of chemistry, physics, or biology, but it can be difficult to find someone to teach part-time or who has the cross-disciplinary expertise or credential authorization to teach more than one subject.

A related issue is the high incidence of eighth-grade math teachers who do not hold a single subject credential in mathematics. In recent years, algebra content has been moved into the eighth-grade curriculum, but little has been done to prepare or support middle school math teachers for the change. Although middle school math teachers are not required by state law to hold a math credential, it may be unreasonable to expect teachers with multiple-subject credentials to successfully teach more specialized content that has traditionally been taught at the high school level. Of all middle school algebra teachers, 24% are fully credentialed in some subject area but lack a math authorization; an additional 11% do not hold a full credential of any kind.

Approaches to the Problem

The problem of out-of-field teaching is addressed to some extent by policies at all levels of the education system. We first describe the federal and state policies that address out-of-field teaching assignments, and then district and school approaches to the problem.

Federal and State Approaches

Federal law requires that all teachers of core subjects be “highly qualified,” defined as having a bachelor’s degree, a credential or working toward one in an alternative certification program (e.g., an intern program), and demonstrated competence in *each* assigned subject area. Secondary teachers can demonstrate subject-matter competence by passing a subject-matter exam or completing coursework equivalent to an undergraduate major. For secondary teachers of more than one subject, this can create compliance problems. California has long had a policy to accommodate secondary teachers who have a full teaching credential and are assigned to teach multiple subjects. *Supplementary authorizations* are issued to those who have completed 20 semester units of coursework in a subject area (roughly comparable to a minor). However, this authorization is not compliant with the federal NCLB legislation because it does not require a teacher to hold a degree major (or the equivalent) in the subject area. In contrast, new *subject-matter authorizations* are now being issued to those teachers who have either a degree major or 32 semester units of coursework in the subject area (the equivalent to the number of units typically required for a major in the subject). This authorization does meet the “highly qualified” teacher requirement of NCLB and is equivalent to an additional full credential authorization.

Over the years, the state has passed several bills that afford schools and districts greater flexibility in assigning teachers. Teachers can be assigned to teach classes if they meet minimum unit requirements, demonstrate subject-matter competence, or demonstrate possession of special skills or preparation outside of their credential authorization (CTC, 2004h). (See Exhibit 23 for the most commonly used forms of flexible assignment allowed by the state and employed by schools and districts.) Districts can also obtain emergency permits or waivers for out-of-field teachers to avoid misassignments. Not all of these provisions meet the more stringent requirements of NCLB.

According to the CTC’s most recent report on teacher assignments from the 1999-2003 period, about 11,700 teachers were assigned under the authority of one of the various assignment flexibility provisions in the Education Code. Of those teachers, 65% were in the four core academic subject areas: English, mathematics, science; and social science. Though these teachers did meet the minimum requirements as outlined in the Education Code, the CTC does not have the authority to conduct qualitative reviews of these assignments. It is not known, for example, what specific courses are used to qualify teachers for those provisions that require course work (CTC, 2004h).

When assignments do not fall under any of the aforementioned flexibility options, it is considered a violation of state Education Code. Since the early 1980s, the state has had a process for monitoring the proper assignment of teachers to classes that match their credential authorizations. County superintendents are required to monitor and report cases of misassignment to the CTC on an annual basis.⁴ State code also requires county superintendents to notify any superintendent of a district in which 5% or more of all certificated teachers in the secondary schools are found to be misassigned and advise him or her to correct the misassignments within 120 calendar days. If the misassignments are not corrected within the allotted time or if the district superintendent has not satisfactorily explained the situation in writing, the county superintendent must notify the CTC (CTC, 2001e). Since 1982 the CTC has been compiling data from county superintendents on the assignment and misassignment of California teachers and issuing statewide reports (CTC, 2004h). As with the monitoring of EL misassignments, the state has intensified its monitoring of out-of-field assignments since the *Williams* lawsuit and ensuing legislation. Schools in API deciles 1–3 are monitored annually, as well as other schools that are considered likely to have problems with teacher misassignment.

⁴ Since 1996, the CTC has required counties to report on one-quarter of its districts each year. Before that, it was one-third.

Exhibit 23 Education Code and Assignment Flexibility

The following provisions from the California Education Code were adopted to provide local districts with greater assignment flexibility:

§44256(b) (6/12, grades 8 and below) allows the elementary credentialed teacher to teach subjects in departmentalized classes grades 8 and below if the teacher has completed twelve semester units, or six upper division or graduate semester units in the subject area to be taught.

§44258.2 (6/12, grades 5-8) allows the secondary credentialed teacher to teach classes in grades 5 through 8, provided that the teacher has a minimum of twelve semester units, or six upper division or graduate semester units in the subject to be taught.

§44258.3 (Craven) allows local school districts to assign credentialed teachers to teach departmentalized classes in grades K-12, irrespective of the designations on their teaching credentials, as long as the teacher's subject-matter competence is verified according to policy and procedures approved by the governing board.

§44258.7(c) & (d) (Committee on Assignments) allows a full-time teacher with special skills and preparation outside his or her credential authorization to be assigned to teach in an "elective" area (defined as other than English, mathematics, science, or social science) of his or her special skills, provided the assignment is approved by the local Committee on Assignments prior to the beginning of the assignment.^a

^a The Committee, established by the Commission, consists of five (5) members appointed by the Commission: two practicing school teachers, one practicing school service representative other than a school administrator, one practicing school administrator or one practicing certificated human resources administrator, and one school board member. All members must have experience in the area of legal assignment authorizations. The committee for local boards is similar in composition to the State Committee on Assignments.

Source: CTC (2004h).

District and School Approaches

Schools and districts manage the problem of staffing extra courses in different ways. Some districts pay teachers extra to teach during their preparation period, rather than hiring additional people. Principals reported that it is generally not difficult to get volunteers because teachers can earn extra money. Other approaches to avoid assigning teachers out of field are hiring part-time teachers or retired teachers, and sharing assignments between schools.

For the most part, when faced with making an out-of-field assignment, administrators seek out volunteers and make their decisions based on a teacher's background and experience, trying to keep the assignment at least within a related subject area (e.g., a chemistry teacher may teach a biology class). One principal explained that she assesses teachers' coursework to gauge their ability to assume an out-of-field assignment. She said, "The teacher has to feel comfortable teaching the subject or we won't give them the assignment." At least one teacher in this district,

however, felt that she had no choice but to accept the out-of-field assignment she was given. She said, “It was the authority’s decision to assign me to earth science. There was a shortage and I got it...I didn’t feel that I had much of a choice.” In other places, out-of-field assignments simply fall to the last hired and therefore least senior teachers.

To prevent misassignments in science, one principal takes a proactive approach by trying to hire teachers with multiple science credential authorizations. He said, “We look for people who can teach more than one science because you never know how many courses you are going to have in each science. Especially with NCLB, our new teachers do have more than one science credential.”

Discussions with district human resources officials and school site administrators indicated that the highly qualified provisions of NCLB and the recent *Williams* settlement have increased pressure on schools to find ways to limit out-of-field teaching. The principal at a middle school commented, “We have no one teaching out-of-field. You can’t. With NCLB you would get dinged. Teachers also have enough units so they have [supplementary or subject-matter authorizations]. But they have to have something to give them permission to teach that other class.” Based on case study data, it is anticipated that attempts to comply with the highly qualified provisions of NCLB will contribute to declines in out-of-field teaching in the future.

Out-of-field teaching appears to result largely from scheduling problems and districts’ attempts to find economy-minded staffing solutions. Despite the state’s longstanding process for monitoring out-of-field teaching and districts’ various efforts to avoid it, the problem has persisted for many years. Though most schools have relatively few out-of-field teachers, the number of students affected across the state is quite significant. NCLB and legislation related to *Williams* are applying new pressure on districts to see that all teachers are appropriately credentialed for their assignments. The important question is whether these new regulations will result in a more skilled teacher workforce, or primarily be a paperwork burden for districts that adds little value to actual teacher quality.

Novice Teachers in Challenging Assignments

Every teacher begins his or her career as a novice. While new teachers should by all means be welcomed and supported in the profession, research suggests suggest that new teachers are less effective, especially in their first year of teaching, than more experienced teachers (Hanushek, Kain, O’Brien, & Rivkin, 2005). To some extent, California policy recognizes that beginning credentialed teachers are only minimally prepared for the classroom. The preliminary credential is meant to be one step in California’s “Learning to Teach continuum” which is followed by the completion of an induction program in the first two years of teaching.

At the same time, the state allows first-year teachers to be the teacher of record and subjects their students to the same accountability provisions as the students of far more

experienced teachers. Worse, new teachers are often given the most difficult assignments, including multiple preparations, large numbers of ELs, large numbers of students with behavioral problems, large class sizes, students with significant academic challenges, or all introductory or remedial classes. In our case studies, the practice of giving challenging assignments to new teachers was widespread, and occasionally, these challenges were nearly impossible (see Exhibit 24).

Exhibit 24 **New Teacher Nightmare: Out-of-Field and Remedial Courses**

A new teacher at an urban high school, in her first year of teaching at the school and her second year of teaching overall, has a clear credential in English and a supplemental in psychology. She was hired because the vice principal had difficulty finding a volunteer to teach two overflow sections of ninth grade science and, although she was not prepared to teach science, agreed to the misassignment in exchange for the job. In addition to teaching two periods of English 1 and one period of composition and literature for students who have failed English 1 (some have failed several times), she teaches one period of regular integrated science for students who have previously failed and one period of sheltered science for ninth and tenth graders. The one science assignment has been difficult because the class is full of repeaters; the science content itself is not challenging to the teacher. She faces the same issue in her repeater English class. The students in her classes have a lot of gang and drug issues, she says—"things that are more pressing than English or science."

There are nearly 35,000 full-time first- and second-year teachers in California—an unknown number of whom have overly challenging or inappropriate assignments. Compared to previous years, there are substantially fewer new teachers, a sign of changes in the overall teacher labor market. On a positive note, fewer new teachers are beginning their careers without having completed their teacher preparation. At the height of the teacher shortage, half of all first- and second-year teachers did not hold a full credential. By 2004-05, that number had dropped to 23%.

A number of factors contribute to inappropriate assignments for new teachers, including school culture and leadership, and in some cases, policies outlined in districts' bargaining agreements. School culture and leadership play a role because the task of assigning classes typically falls to school site administrators, usually with some input from teachers and/or department chairs. In most cases, the assignment process is fairly straightforward. Teachers submit their assignment preferences or department chairs make recommendations to either the vice principal or principal, and that person tries to accommodate each teacher's request. The extent to which experienced teachers are allowed priority in choosing assignments appears to vary from site to site, and sometimes from department to department within a school site. Some

schools and departments have an unwritten tradition of giving senior teachers preference, and in many cases, teachers choose to steer away from the most challenging assignments.

Case study data indicate that secondary schools struggle more with inappropriate assignments than elementary schools. At the secondary level, course offerings are frequently organized around academic levels (Advanced Placement, honors, college prep, remedial), making it difficult to ensure that all teachers encounter a variety of academic levels throughout their day.

Some bargaining agreements affect school-level assignment practices while others do not. Many teacher contracts do not mention the assignment of teachers at all; others specifically delegate the responsibility of assignment to site-level administrators. In these cases, the extent to which seniority plays a role in classroom assignments, if at all, varies from school to school.

Other agreements have language that grants a minor degree of preference to senior teachers when making assignment decisions, especially in cases where two teachers are otherwise equally qualified. For example, one large urban district's bargaining agreement requires principals and teachers to collaboratively make track and grade change decisions; seniority is used if two teachers are equally qualified for an assignment. Elk Grove's agreement allows teachers to request reassignments, which are considered first on the basis of a teacher's credentials and qualifications and then on the basis of seniority if all other relevant criteria are equal. In San Diego, the bargaining agreement favors fully credentialed teachers. It specifies that interns are to be assigned to classes after all other bargaining unit members have had a chance to bid for vacancies. These particular provisions may facilitate the movement of more senior teachers into the site's most desirable assignments, and certainly do not address the problem of inexperienced teachers getting the "leftovers," or most challenging assignments.

Aside from any provisions that specifically address assignment practices, bargaining agreements may indirectly encourage inappropriate assignments for new teachers if their transfer provisions lead to hiring delays (see Chapter 6). In many districts, new teachers cannot be hired until close to the beginning of the school year, long past the date when assignments are handed out, and are left the most undesirable positions. The most recent data available indicate that one-quarter of California teachers were offered their job less than 1 month before the start of the school year. Nearly another quarter were offered their teaching job *after* the school year had already started (Shields et al., 1999).⁵

Approaches to the Problem

While it aims to prevent out-of-field assignments and EL misassignments, state policy does not address the problem of inappropriate assignments, which are difficult to quantify. State education code permits the assignment of a single subject teacher, with his consent, to teach any

⁵ Late hiring of teachers in the late 1990s, when the referenced study was completed, may have been worse than it is presently because of the severe teacher shortage at that time.

subject in his authorized field at any grade level, PreK-12 and adult classes. Likewise, a multiple subject teacher may be assigned, with her consent, to teach in any self-contained classroom at any grade level, PreK-12 and adult classes (CTC, 2001e).

At the district level, the problem of inappropriate assignments for new teachers is addressed in different ways. Some bargaining agreements have provisions to protect all or new teachers from unreasonable assignments, such as too many “preparations” (different courses to prepare for). For example, one large urban district’s bargaining agreement limits teachers to three preps, in recognition “that the number of different subject preparations directly affects the work hours of the secondary classroom teachers.” Another district’s contract limits first-year secondary teachers to two preps. Yet another district’s bargaining agreement specially notes that secondary teachers in their first two years in the profession will not be given “roving” assignments—that is, assignments in which the teacher must move from classroom to classroom every period, month, or track. Another agreement prevents new teachers from being assigned as “traveling teachers” (moving from school to school).

Exhibit 25 **Policies to Ensure that Teacher Assignments are Balanced and Fair**

One large district’s contract takes a different approach to the problem of inappropriate assignments by requiring site administrators to ensure that the balance of permanent and non-permanent teachers in each grade level and/or track approximates the balance at the site. Furthermore, new elementary schools teachers must teach the same grade for their first two years; this practice allows them to become comfortable with teaching and the school environment without having to be concerned about how to teach first grade one year and fifth grade the next. Also, teachers assign students, through a process called reorganization, to classes based on a variety of factors (e.g., EL status, behavior, academic strengths). This tactic ensures that all classes have students of mixed ability and no one teacher or group of teachers has the most challenging students in their classrooms.

Generally, however, bargaining agreements hand over responsibility for teacher assignments to the site-level administrator. Given the primary responsibility for making assignments, some principals work hard to ensure appropriate assignments for new teachers. In a small urban district, for example, a high school principal reported that he recently stopped the English department chair from giving a “good class” to a senior teacher when a vacancy opened up. He argued, “We lose new teachers if we give them the most difficult classes.” The principal acknowledged that this approach is not a popular with veteran teachers, but, he said, “They will accept it.” An experienced science teacher and former chair in another district echoed those sentiments: “We try not to put new teachers in out of field...We don’t think it is a good idea—we want them to stay.”

In addition to protecting new teachers from inappropriate assignments, high school leaders can also make efforts to give new teachers some of the more desirable assignments, rather than giving them all to experienced teachers. In a suburban district, for example, the English department chair assigned the new teacher to be the yearbook advisor (widely known on the campus as one of the least desirable positions due to its long hours), but filled out her schedule with reduced class-size freshman English classes so she would have only two preps and fewer students overall. This approach appears to be common across the school, including the math department. The principal said: “An informal policy in math is that everyone will have to teach algebra (not everyone but most). We try to keep it limited to two preps for new teachers. Most teachers like to have two preps.” In this district, beginning teachers were also assigned to teach Advanced Placement courses—classes often designated the coveted province of senior teachers in other districts.

Despite the progressive examples described above, the inappropriate assignment of new teachers is still a common practice in schools across the state. Placing new teachers in appropriate assignments is a constant challenge for those in charge of school staffing. There will always be new teachers; problems occur when they are given very difficult assignments that would be challenging for anyone, much less a beginner who is just getting a footing in the classroom. Another problem is having a large number of new teachers concentrated in one place, along with large numbers of underprepared and out-of-field teachers. We will address this issue in our next chapter on the distribution of teachers across the state.

Conclusion

This chapter has underscored the complexities of ensuring that every student have a fully qualified and effective teacher. Even when policy-makers and practitioners succeed in getting fully credentialed teachers into classrooms, many challenges remain. Teaching English learners requires a certain set of skills that many teachers have not had the opportunity to master. Scheduling demands in high schools often push principals to assign teachers to one or more classes for which they do not have the appropriate training. School culture, sometimes in combination with bargaining agreements, can lead to novice teachers getting the most challenging assignments as they struggle in their first years of teaching. Providing every student with the teacher he or she needs will require more than simply meeting credentialing requirements or the provisions of NCLB. It will require continued effort to support all teachers while revising local policies and practices to make sure students’ needs, and not adults’ preferences, drive teacher assignment.

6. The Distribution of Teachers Across California's Schools

Maldistribution of Teachers Across the State

- Six percent of schools (about 500) have at least 20% underprepared teachers, and 19% of schools have at least 20% novice teachers.
- Low-performing schools tend to have higher proportions of underprepared and/or novice teachers than high-performing schools. In 2004-05, one out of every five teachers (21%) in the lowest achieving schools were underprepared and/or novice, compared to only 1 in 10 teachers (11%) in the highest achieving schools.
- Schools serving high proportions of minority students are also more likely to have more dense concentrations of underprepared and novice teachers. In 2004-05, schools serving 91 to 100% minority students had an average of 20% underprepared and/or novice teachers. Schools serving few or no minority students had an average of 11% underprepared and/or novice teachers.
- Like all underprepared teachers, interns are more concentrated in high-minority schools. Over half (53%) of all interns are teaching in schools with 91 to 100% minority students, compared with only 3% of interns in schools with the lowest minority student population.
- Finding teachers in shortage subject areas is a particular problem for high-need schools. In 2004-05, 22% of special education teachers in high-minority schools were underprepared, compared with 6% in schools serving few minority students. As a group, high-minority schools also have four times as many underprepared math and science teachers as low-minority schools.

Contributing Factors to Teacher Maldistribution

- Teachers tend to be most attracted to familiar environments—in many cases suburban areas. Urban and rural schools face greater recruitment challenges, and often must “import” teachers from outside their communities.
- Many of the extra resources that high-need districts had for addressing their recruitment problems, such as Teaching as a Priority (TAP) grants, have been chipped away in recent years.
- Good working conditions, including support for new teachers, are critical for attracting and retaining teachers in high-need schools. In some cases, high salaries may mitigate the effects of poor working conditions, but only to a degree.
- High-need schools may lose prospective teachers when hiring is delayed due to insufficient budget and enrollment data, or time spent processing internal transfers.
- Some collective bargaining agreements have provisions regarding teacher transfers that may unintentionally contribute to within-district maldistribution. Districts have few levers to correct an imbalance in staffing once it has occurred.

As outlined in previous chapters, the overall balance between the supply of fully qualified teachers and the demand for those teachers in the state's classrooms has improved over the past few years. Overall, districts are having an easier time staffing their schools. The causes of this improvement are difficult to pinpoint. They likely include shifts in the labor market, with demand leveling off and economic factors in the broader California economy providing less attractive alternatives for college graduates. Policy also likely has had an impact: the state invested millions in strengthening the teacher pipeline with new resources targeted on increasing the production of fully credentialed teachers and on building systems to more effectively recruit them into the profession.

But problems remain. We still have about 20,000 underprepared teachers in the state's classrooms, 10,000 of whom are not NCLB-compliant. More importantly, underprepared teachers are still distributed unevenly throughout the state. California's lowest-performing schools—those where highly qualified and experienced teachers are most needed—continue to have the least prepared teaching staffs. Similarly, schools that serve the highest proportion of poor and minority students and English-language learners struggle more with attracting and retaining fully prepared teachers.

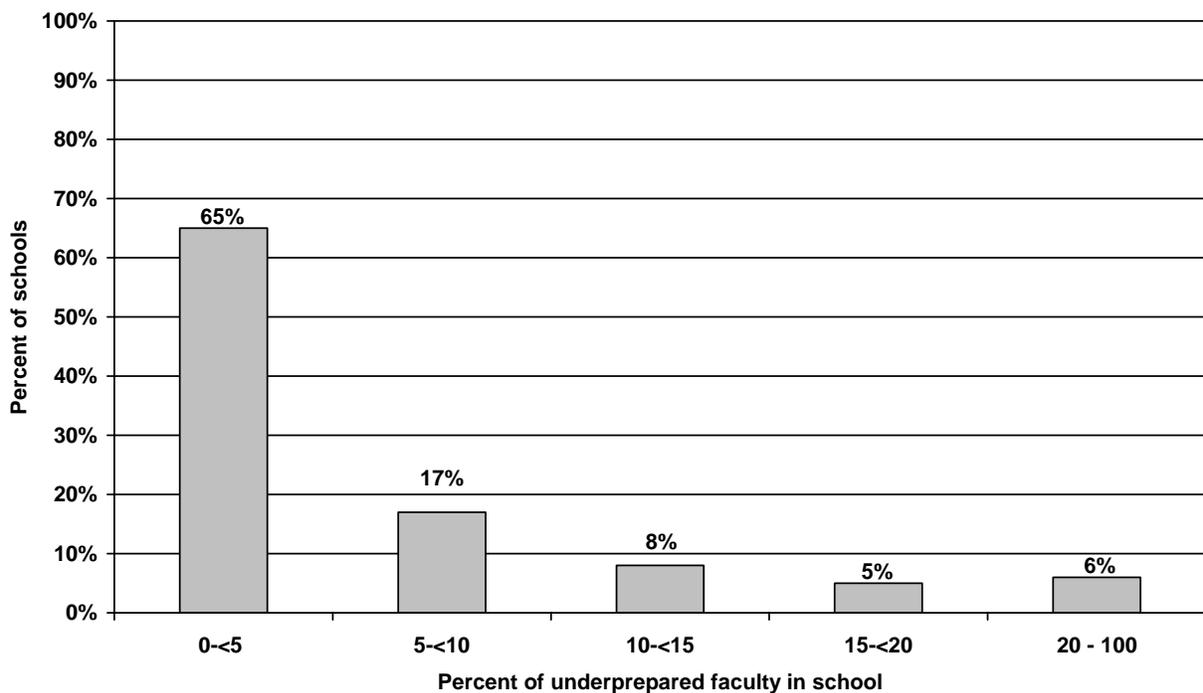
This persistent concentration of underprepared teachers in the lowest-achieving schools is particularly troublesome given that expectations for students are on the rise. This year's seniors must pass the California High School Exit Exam (CAHSEE) to graduate from high school, and all high school students must also now pass Algebra I to earn a diploma. It can be argued that if all students are required to meet higher standards to graduate from high school, each should have access to a truly effective and knowledgeable teacher in every subject. Yet many of the programs initiated to address this problem, including various recruitment efforts and the Governor's Teaching Fellowship Program, have been cut as a result of the state's budget crisis.

In this chapter, we present state-level data on how underprepared and novice teachers are distributed throughout California's schools, and how together they are disproportionately found in schools serving high percentages of poor and minority students and English learners, and in schools whose students are not performing well on the state's standardized achievement tests and on the state's High School Exit Exam. We also describe how high-need students are more likely to have underprepared teachers in the most chronically understaffed subject areas, notably special education and certain secondary subjects, including math and science. Citing our case studies of 10 California districts, we describe how these subject area shortages impact schools and students. In the second half of the chapter, we turn to a discussion of what causes the maldistribution of teachers across the state and in certain subject areas, and give a few examples of district efforts to address the maldistribution problem. This discussion also is based on our recent case studies of California districts.

Maldistribution of Teachers Across the State

Because the overall number of underprepared teachers has significantly dropped in recent years, more schools have very few or no underprepared teachers. In 2004-05, 65% of public K-12 schools in the state had 5% or fewer underprepared faculty (see Exhibit 26), compared to 55% the previous year. In addition, the number of schools with 20% or more underprepared teachers decreased. In 2004-05, just 6% of schools had 20% or more underprepared teachers, compared with 12% the previous year.

Exhibit 26
Distribution of Schools, by School-Level Percentage of Underprepared Teachers, 2004-05



Sources: CDE (2005g & 2005j); SRI analysis.

Note: See Appendix B for more information.

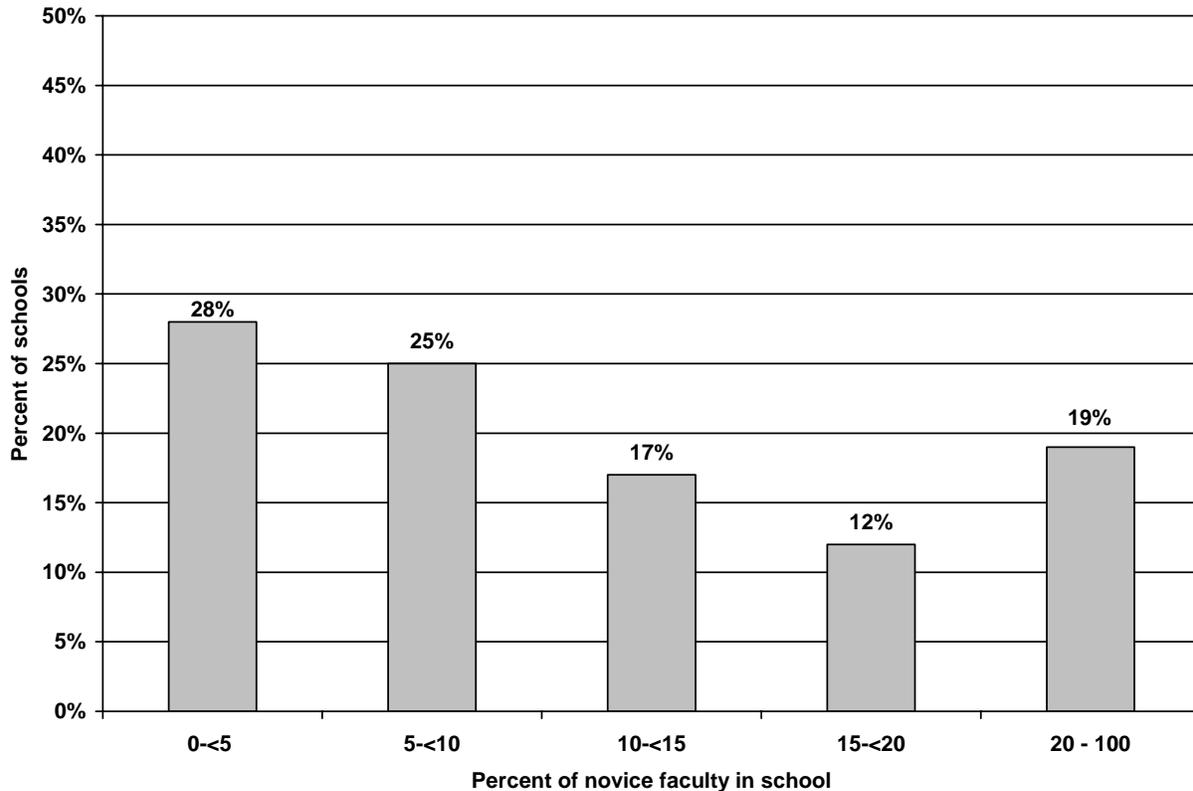
This overall picture represents a substantial improvement over the past decade, but still points to significant staffing problems in a subset of schools. Despite all the economic and labor market changes in the state, nearly 500 schools still have at least 20% underprepared teachers. These 500 schools are located in 38 (of 58 total) counties, with about half in Los Angeles county. Most are located in large cities, or on the fringes of urban areas. On average, these schools serve 18% African-American students and 56% Latino students, compared with 8% and 47% statewide. Over one-third (38%) are charter schools. Almost 403,000 students are enrolled in these approximately 500 schools.

Case study research from this and prior years shows that while schools can easily absorb the impact of a few underprepared teachers, more substantial concentrations can be a drain on a school's resources (see Shields, et al., 1999, 2001). Frequently, administrators must spend a disproportionate amount of time supervising, supporting, and training those teachers who have not met even the state's most basic qualifications for a credential. Those teachers who lack basic pedagogical training may also struggle to benefit from their district's professional development offerings. Untrained teachers have less expertise to offer in meetings and collaborative efforts.

Besides eroding schools' professional cultures, high concentrations of underprepared teachers can threaten students' chances for success. As students proceed through the grades, they are highly likely to have an underprepared teacher. Today's sixth graders who attended a lowest-achievement-quartile elementary school throughout their elementary years have had a 40% chance of being taught by one underprepared teacher, and a 30% chance of having more than one. This compares with sixth graders who attended the highest-achievement-quartile schools who have had a 20% chance of being taught by an underprepared teacher, and a 2% chance of being taught by more than one.

Other research has also pointed to potential problems caused by a concentration of novice teachers in schools because they are, in general, less effective than their veteran peers (Hanushek, Kain, O'Brien, & Rivkin, 2005). Across the state, 28% of schools have fewer than 5% first- or second-year teachers—a manageable number. On the other hand, 19% of schools have more than 20% novice teachers (see Exhibit 27). These schools are likely struggling with high turnover, and spend precious resources each year hiring and inducting new teachers. Also, with novices comprising such a large proportion of the faculty, the overall level of professional expertise in the school is lessened.

Exhibit 27
Distribution of Schools, by School-Level Percentage of Novice Teachers, 2004-05



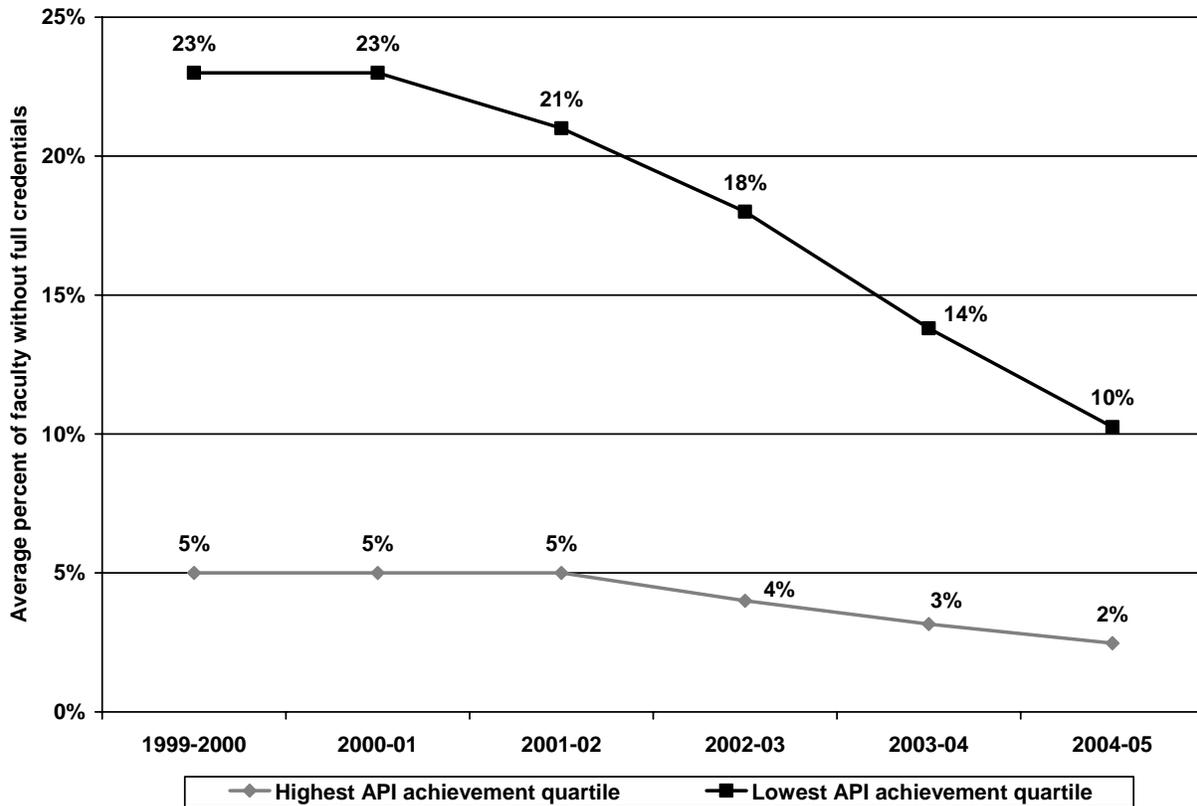
Sources: CDE (2005g & 2005j); SRI analysis.

Note: See Appendix B for more information.

Maldistribution by School-Level Achievement

The schools that most often have high proportions of underprepared teachers are those that are low-performing and most in need of highly skilled educators. Although it has lessened over the past several years, the gap between high- and low-performing schools still persists (see Exhibit 28). In schools that fell in the lowest achievement quartile on the state’s Academic Performance Index (API) in 2004-05, an average of 10% of teachers were underprepared, compared with an average of just 2% in the highest performing schools. Schools identified for improvement under Title I are also more likely to have underprepared teachers. In 2004-05, 10% of teachers in program improvement schools were underprepared, compared with 7% of all teachers statewide (data not shown).

Exhibit 28
Underprepared Teachers in Schools in the Highest and Lowest
API Achievement Quartiles, 1999-2000 to 2004-05

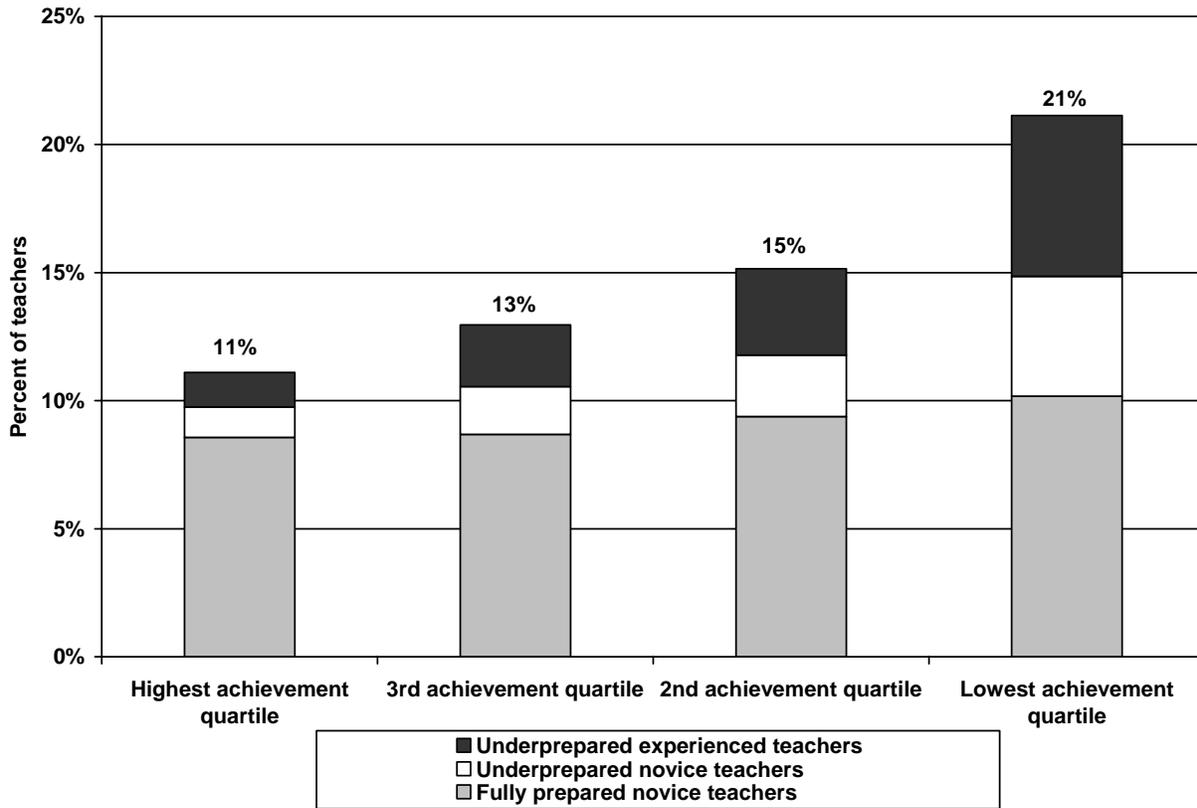


Sources: CDE (2000d, 2000e, 2001d, 2001e, 2002d, 2002e, 2003e, 2003f, 2003g, 2004g, 2004h, 2004i, 2005g, 2005j, 2005k); SRI analysis.

Note: See Appendix B for more information.

Underprepared teachers are concentrated in low-achieving schools. Compounding the problem is the number of novice (first- and second-year) teachers in all schools. Fully credentialed novice teachers tend to be spread more evenly across the state’s schools, although underprepared novice teachers are more commonly found in low-performing schools. In 2004-05, one out of every five teachers (21%) in the lowest achieving schools were either underprepared, novice, or both underprepared and novice, compared to only one in ten teachers (11%) in the highest achieving schools (see Exhibit 29). The combined impact of so many underprepared and novice teachers is problematic. Over the course of several years at such a school, a student is likely to face more than one underprepared and/or novice teacher, and possibly a string of them in back-to-back years. In secondary schools, an individual student could have more than one underprepared or novice teachers in the course of a single day, as well as an out-of-field teacher (a phenomenon we discussed in the previous chapter). Case studies indicate that schools typically have neither the technology nor the time to identify instances of students who have been assigned multiple underprepared, novice, or out-of-field teachers.

Exhibit 29
Underprepared and Novice Teachers, by API Achievement Quartiles, 2004-05

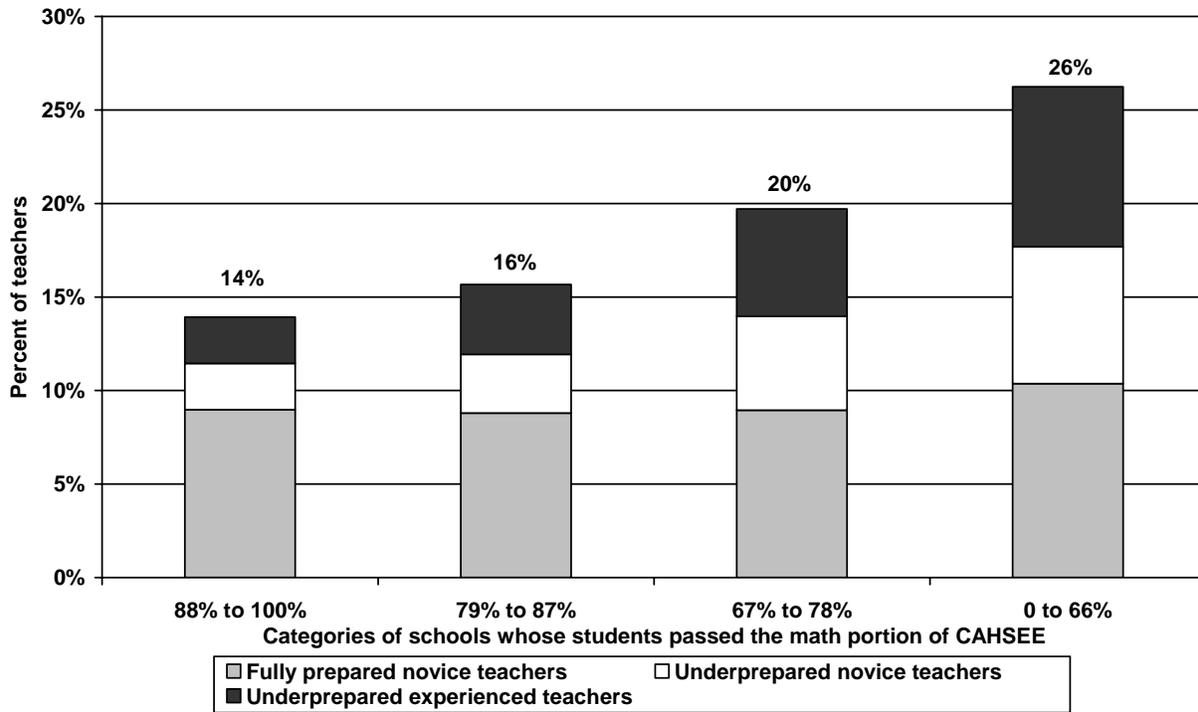


Sources: CDE (2005g, 2005j, 2005k); SRI analysis.

Note: See Appendix B for more information.

An analysis of the distribution of underprepared teachers by school-level achievement on the California High School Exit Exam (CAHSEE) shows a similar pattern. In 2005, 26% of teachers in schools with the lowest passing rates on the math portion of CAHSEE were underprepared and/or novice teachers (see Exhibit 30). In comparison, 14% of teachers in schools with the highest passing rates were underprepared or novice teachers. In English, the distribution is similar. Twenty-five percent of teachers in schools with the lowest passing rates on the English portion were underprepared and/or novice teachers in 2005, compared with 14% in schools with the highest passing rates (see Exhibit 31). The 2005 numbers represent a slight improvement over the previous year's numbers, but still reveal a striking disparity. Out-of-field teachers, described in Chapter 5, may further exacerbate the problem. Out-of-field teachers are evenly distributed across California schools. However, when they are combined with large numbers of underprepared and novice faculty, there is an even greater likelihood that students in schools with the lowest pass rate will be taught by a less than fully prepared teacher.

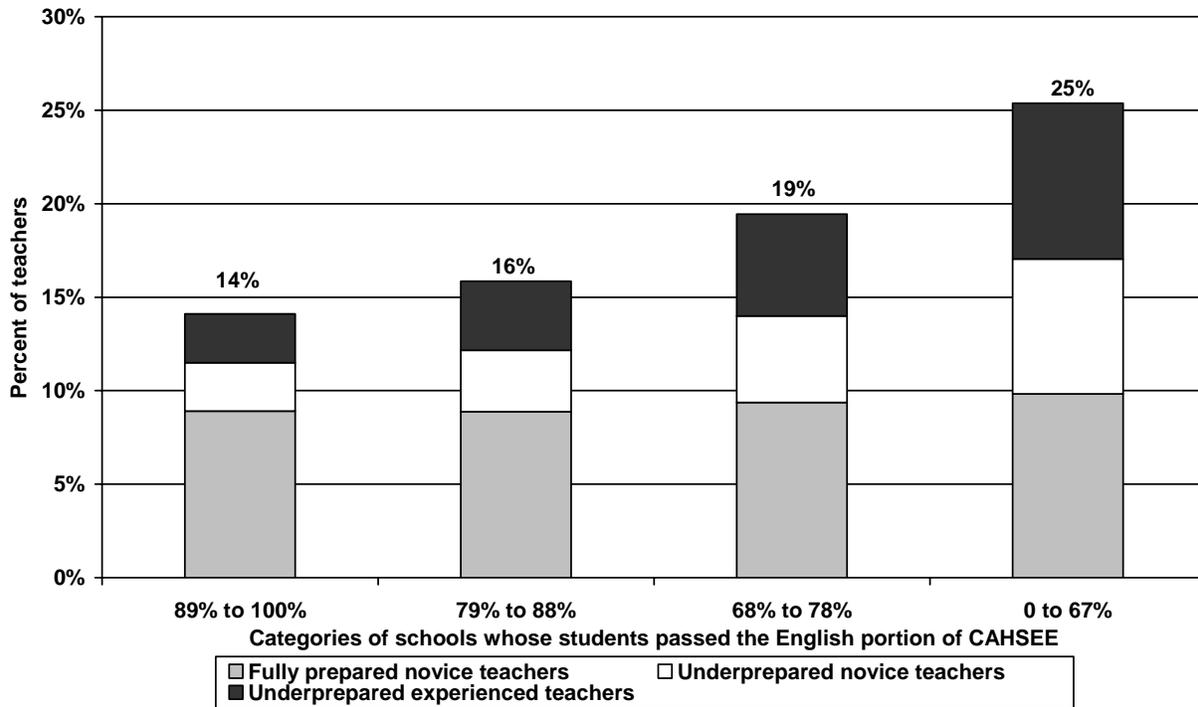
Exhibit 30
Underprepared and Novice Teachers, by School-Level Percentage
of 10th-Grade Students Passing CAHSEE Math, 2004-05



Sources: CDE (2005g, 2005j, 2005l); SRI analysis.

Note: See Appendix B for more information.

Exhibit 31
Underprepared and Novice Teachers, by School-Level Percentage
of 10th-Grade Students Passing CAHSEE English, 2004-05



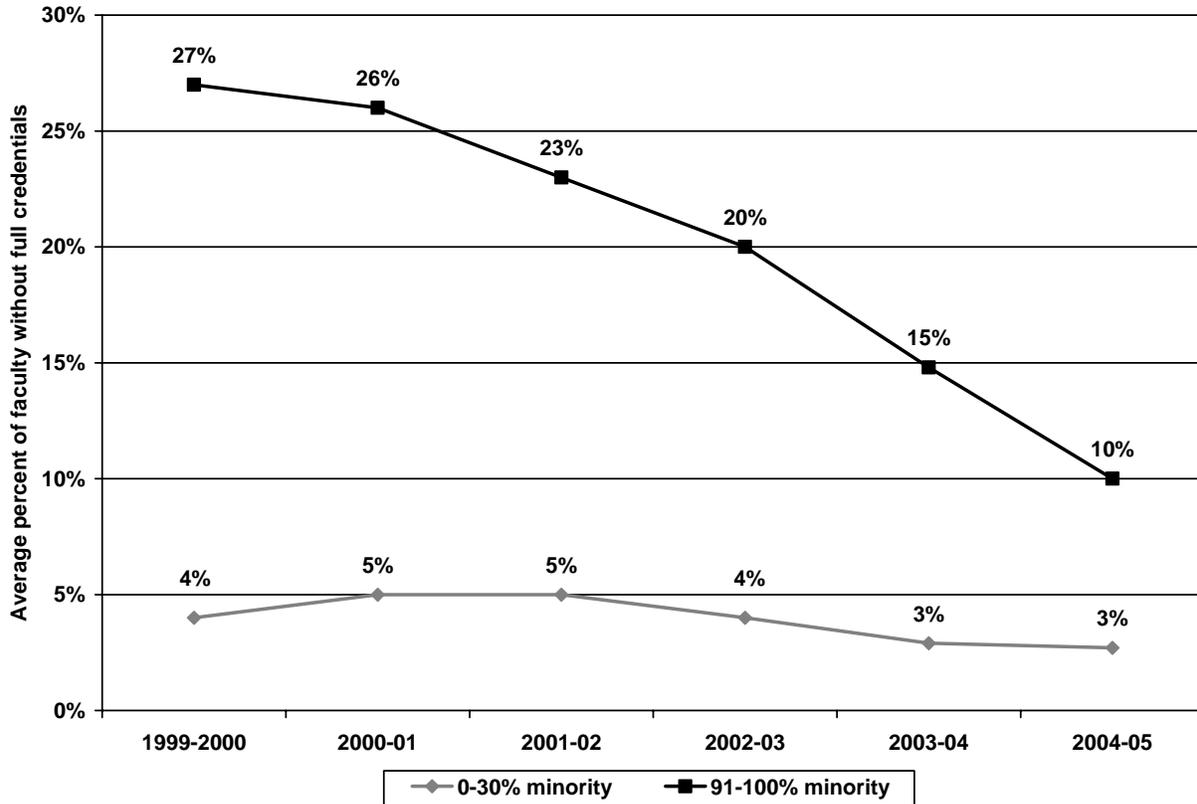
Sources: CDE (2005g, 2005j, 2005l); SRI analysis.

Note: See Appendix B for more information.

Maldistribution by Key Student Characteristics

Schools with large proportions of minority students are also more likely to have underprepared teachers than are schools with few minority students. As with the gap between high- and low-performing schools, this gap has narrowed substantially in the past few years (see Exhibit 32). However, the data still point to an inequitable distribution of resources. In schools where the students are predominantly from minority backgrounds, 10% of teachers, on average, were underprepared in 2004-05. In schools with few minority students, 3% of teachers, on average, were underprepared.

Exhibit 32
Underprepared Teachers in Schools with the Highest and Lowest
Percentages of Minority Students, 1999-2000 to 2004-05

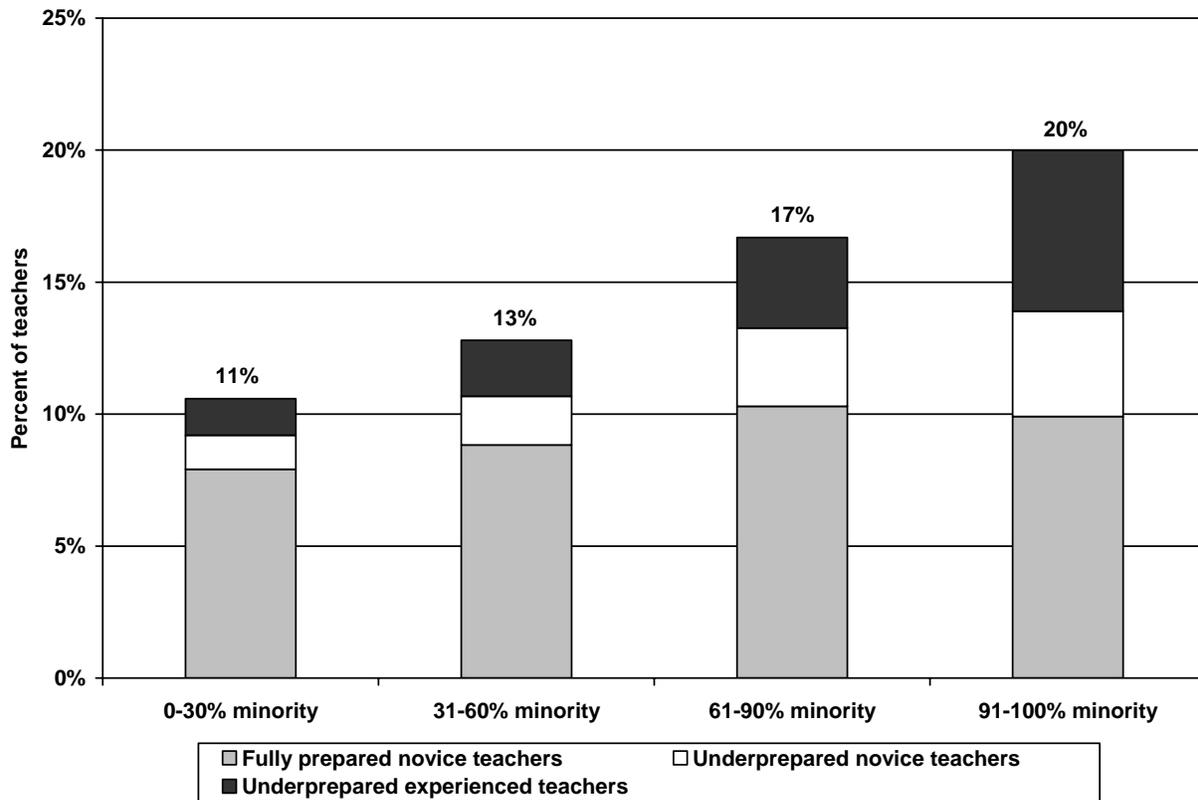


Sources: CDE (1999c, 1999e, 1999f, 2000c, 2000d, 2000f, 2001c, 2001d, 2001f, 2002c, 2002d, 2002f, 2003d, 2003e, 2003f, 2004g, 2004h, 2005g, 2005h, 2005j); SRI analysis.

Note: See Appendix B for additional information.

When novice teachers are added in, the lack of minority students’ access to fully prepared and experienced teachers is more apparent. In 2004-05, 20% of teachers schools serving 91 to 100% minority students were underprepared and/or novice teachers (see Exhibit 33). Eleven percent of teachers in schools serving few or no minority students were underprepared and/or novice teachers.

Exhibit 33
Underprepared and Novice Teachers, by School-Level Percentage
of Minority Students, 2004-05

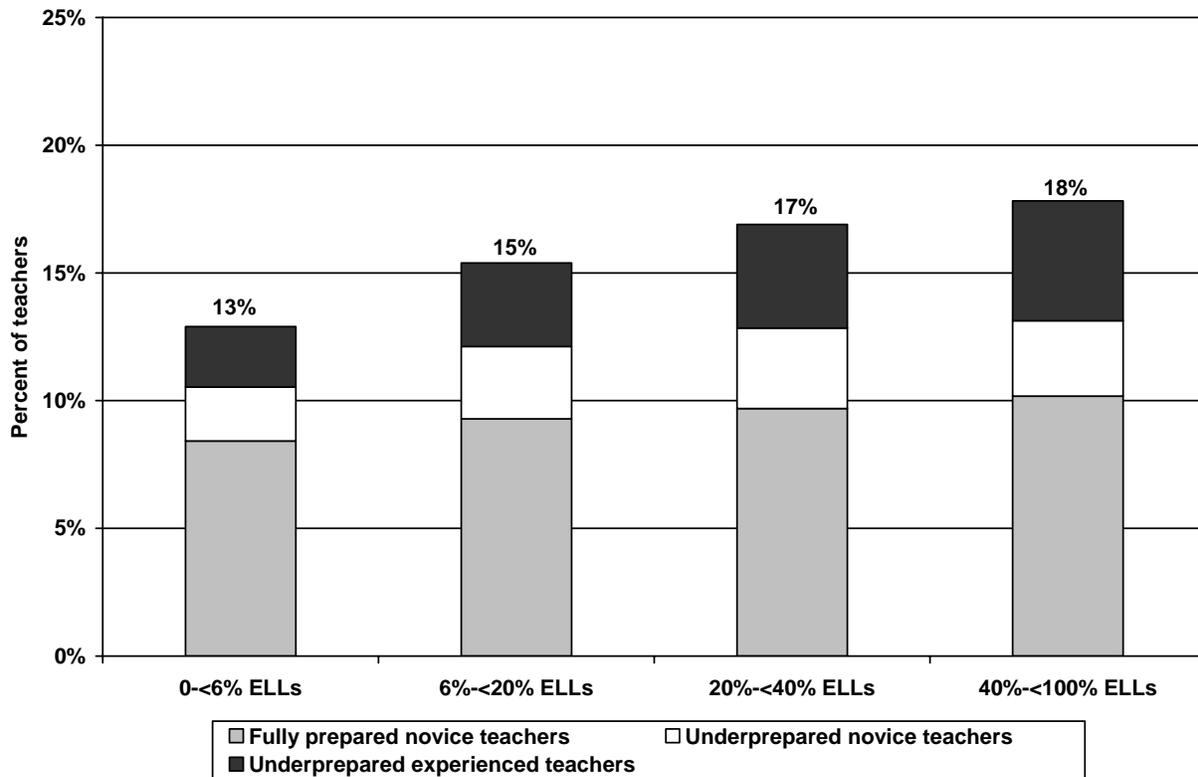


Sources: CDE (2005g, 2005h, 2005j); SRI analysis.

Note: See Appendix B for more information.

Schools serving high proportions of English learners (ELs) are also more likely to have more dense concentrations of underprepared and novice teachers. In schools with 40% or more ELs, 18% of the teachers are underprepared and/or novice (see Exhibit 34). In contrast, schools with 6% or fewer ELs have 13% underprepared and/or novice teachers.

Exhibit 34
Underprepared and Novice Teachers, by School-Level Percentage
of English Learners, 2004-05

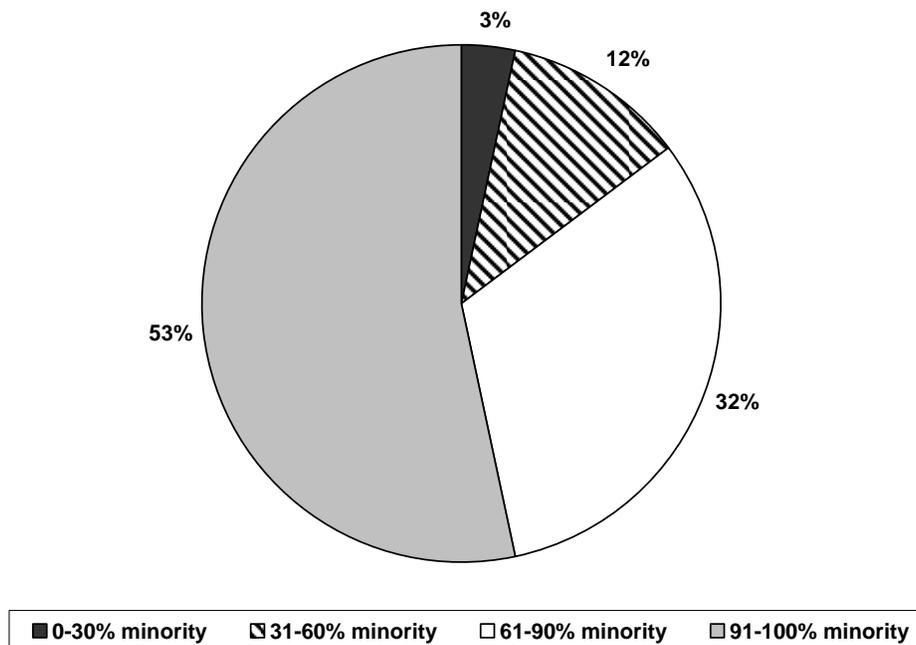


Sources: CDE (2005g, 2005j, 2005m); SRI analysis.

Note: See Appendix B for more information.

As the intern route through teacher preparation becomes increasingly popular (discussed in Chapter 4), it bears monitoring where interns are most likely to take jobs. Fifty-three percent of all the interns in California are teaching in schools with 91 to 100% minority students (see Exhibit 35). In contrast, only 3% of interns can be found in schools with the lowest minority student population.

Exhibit 35
Distribution of Interns, by School-level Percentage of Minority Students, 2004-05



Sources: CDE (2005g, 2005h, 2005j); SRI analysis.

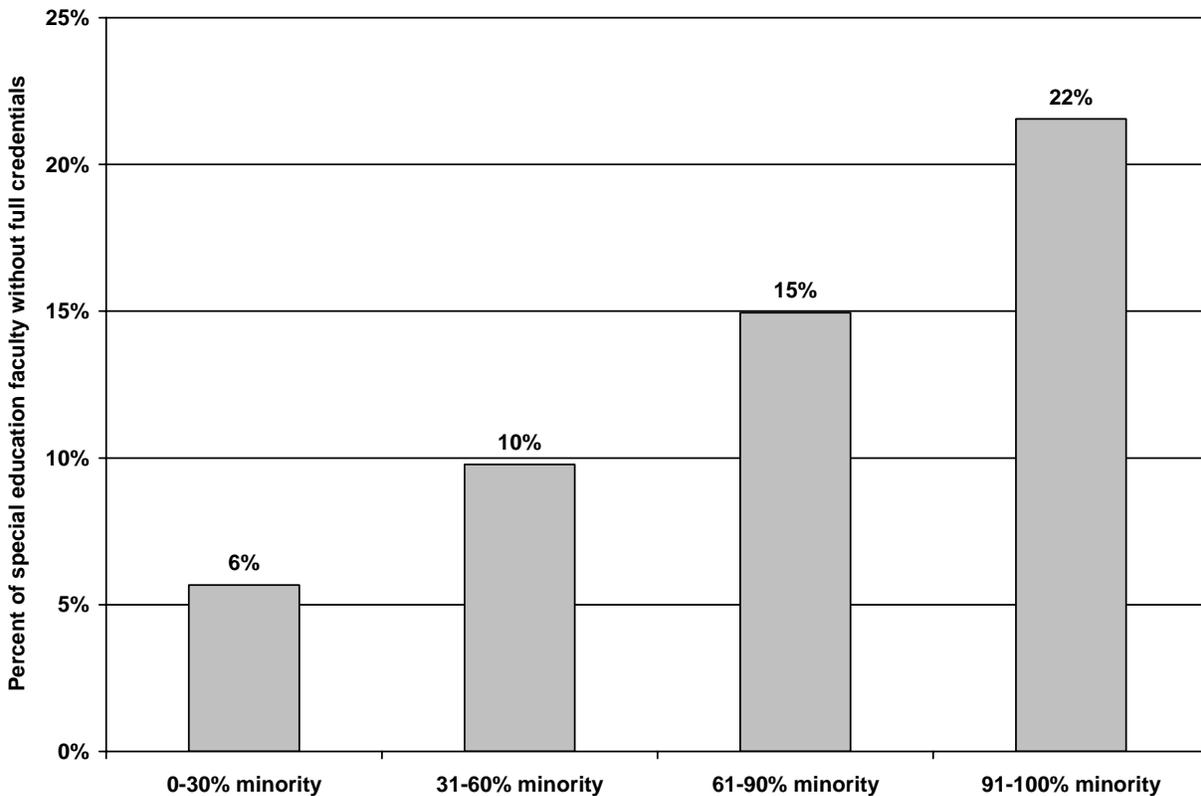
Note: See Appendix B for more information.

The distribution of interns by school achievement level shows a similar pattern. Fifty-eight percent of interns teach in schools that fall in the lowest achievement quartile on the API (data not shown), and only 6% teach in schools in the highest achievement quartile. Although intern programs in California are subject to the same standards as traditional programs, the distribution of interns indicates that higher performing schools prefer not to hire them.

Subject Area Shortages in Hard-to-Staff Schools

As described in the previous chapter, most California districts are struggling to find qualified teachers in shortage subject areas such as math, science, and special education. For hard-to-staff schools, this challenge is especially difficult. In 2004-05, 22% of all the special education teachers in schools serving high proportions of minority students were underprepared. In contrast, only 6% of the special educators in schools serving few minority students were underprepared (See Exhibit 36).

Exhibit 36
Underprepared Special Education Teachers, by School-level Percentage
of Minority Students, 2004-05

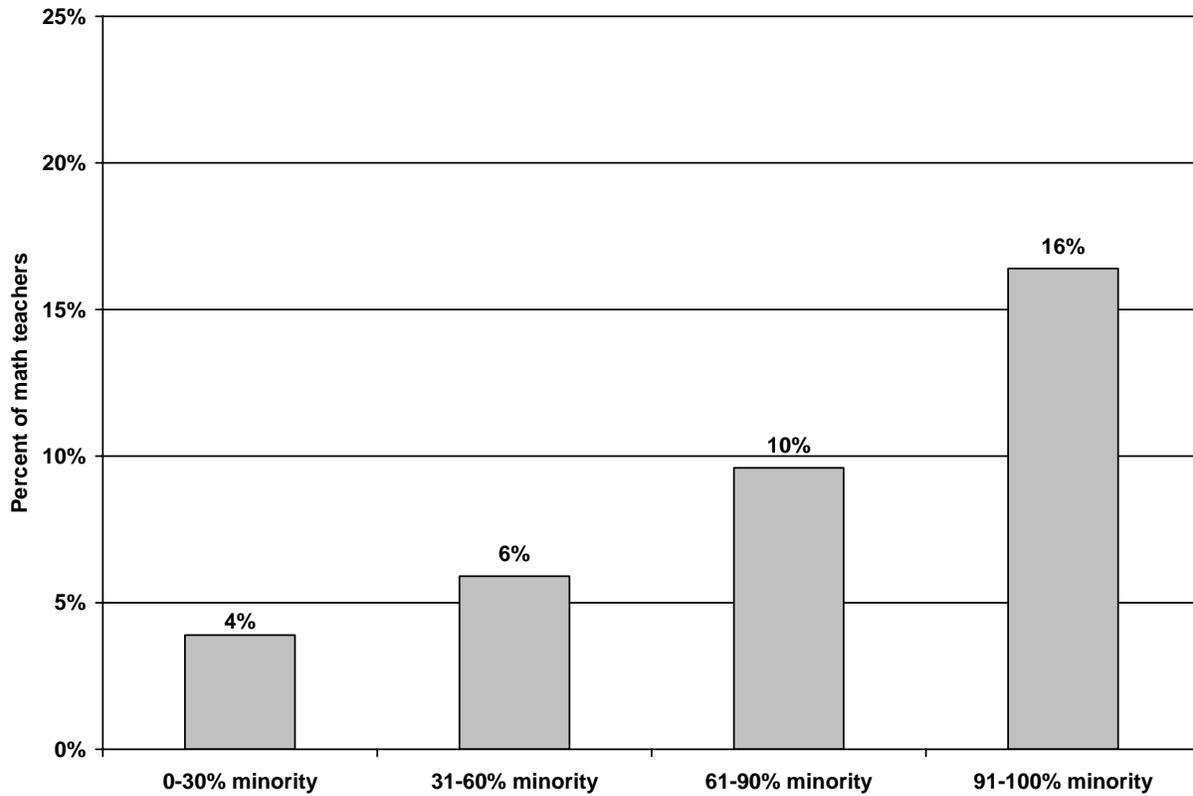


Sources: CDE (2005g, 2005h, 2005j); SRI analysis.

Note: See Appendix B for more information.

Hard-to-staff schools also struggle to hire enough qualified math and science teachers. As a group, high-minority schools have four times as many underprepared math teachers as low-minority schools (see Exhibit 37). The distribution of underprepared science teachers is identical (see Exhibit 38). Some individual districts have chronic and severe difficulties in finding credentialed math and science teachers who are willing to work in their schools. In one suburban district, the Assistant Superintendent of Human Resources reported that the district's hardest-to-staff school had adopted an integrated science program specifically to address the problem of finding teachers who are credentialed in the appropriate science subdiscipline. (Integrated science courses are easier to staff because they require only that a teacher hold any science credential, rather than a credential in a particular subdiscipline of science, such as chemistry.)

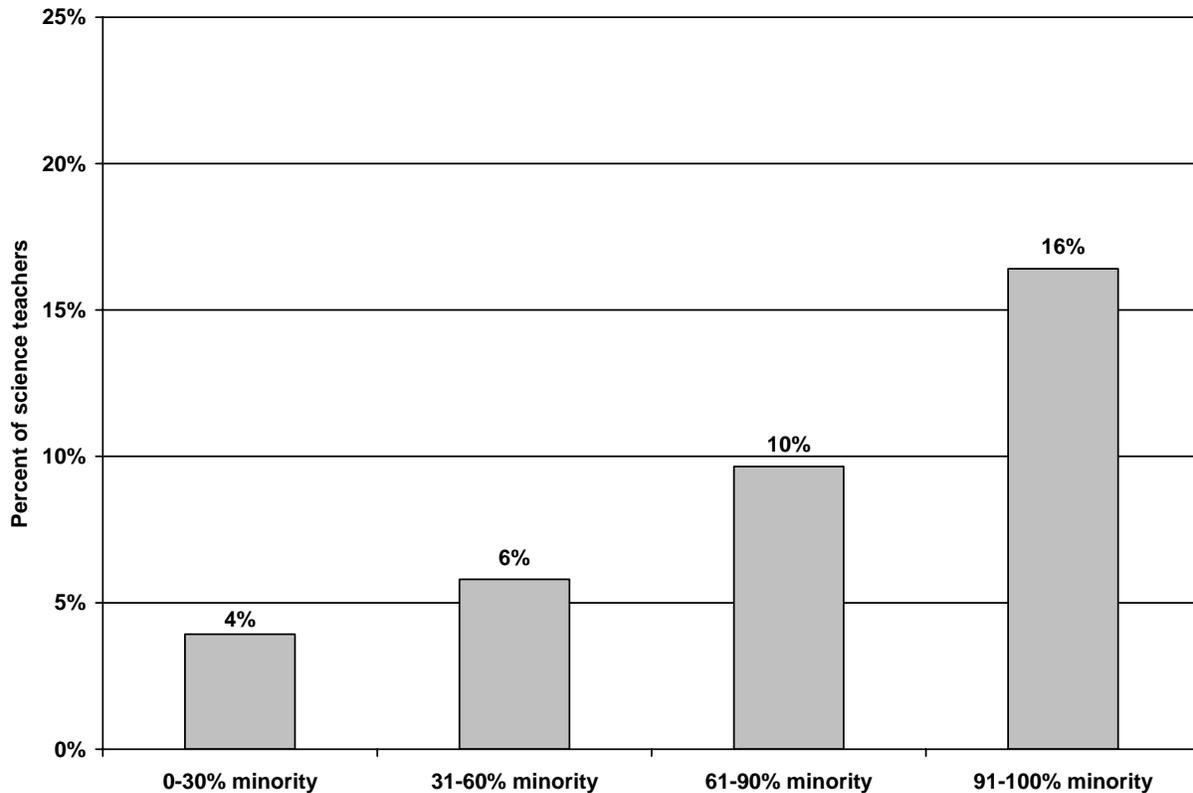
Exhibit 37
Distribution of Underprepared Teachers with a Math Assignment,
by School-level Percentage of Minority Students, 2004-05



Sources: CDE (2005g, 2005h, 2005j); SRI analysis.

Note: See Appendix B for more information.

Exhibit 38
Distribution of Underprepared Teachers with a Science Assignment,
by School-level Percentage of Minority Students, 2004-05



Sources: CDE (2005g, 2005h, 2005j); SRI analysis.

Note: See Appendix B for more information.

As the exhibits above clearly demonstrate, California’s teachers are not distributed evenly across schools, and have not been for many years. As the overall gap between teacher supply and demand has narrowed in recent years, all schools have benefited. However, there is still ample room for improvement to ensure that students in all schools have equal access to highly qualified teachers. When underprepared, novice, and (in secondary schools) out-of-field teachers are counted together, it becomes clear that students in high-need schools are likely to have at least one teacher—or even a series of them—who is not fully prepared to help them succeed. And although the maldistribution of teachers is less severe now than in previous years, it may again worsen in the future if some of the factors causing it are not addressed. The historical patterns show that when there are too few qualified and experienced teachers to go around, high-need students are shortchanged. Looking forward, policy-makers, who have cut many of the programs designed to address the maldistribution, need to focus on identifying and addressing its root causes and developing policies that would support a more equitable distribution of teachers. Our case studies (and other research) suggest that a number of factors contribute to the problem. We turn to these next.

Contributing Factors to Teacher Maldistribution

In this section we discuss the various factors that contribute to the maldistribution of underprepared teachers across California's schools, as well as promising policies and practices that attempt to address these factors. First we describe how teacher motivation and limited resources present recruitment challenges for many high-need schools. Next we discuss how working conditions of the school and district can contribute to the likelihood that teachers will be attracted to, and stay in, a high-need school. This is followed by a discussion of the role of compensation in attracting and retaining teachers. Finally, we address hiring practices and policies regarding the placement and transfer of teachers within a district. In each section we present case study data to describe the problem, and follow it with examples of districts or schools that appear to be consciously counteracting the maldistribution, and other examples of places that are unintentionally facilitating it.

Recruitment

For some districts, active recruitment of teachers is rarely required; for others, it consumes substantial amounts of time and money. One reason for the disparity is that teachers are not equally attracted to all schools and districts. Our case study evidence and other research (e.g. Boyd, et al, 2005) suggest that teachers tend to be most attracted to familiar environments, those schools and districts where they have a personal connection, or that are similar to the types of schools they attended themselves. For example, an elementary teacher we interviewed wanted to avoid taking a job in an urban area. She did not feel comfortable or safe in some of the neighborhoods where she interviewed for a job—partly a function of the urban neighborhoods' deteriorating landscapes, and also a function of her suburban background. She ultimately took a job in an urban district "out of desperation" because she did not hear back from the several other suburban districts to which she applied. In contrast, another teacher in the same urban area said that the urban district was her first choice. This teacher is an alumnus of the district, and grew up in a similar neighborhood to the one in which her school is located. "I understand the mentality. I'm part of the school district. I experienced some inequalities when I was there [as a student]. I understand what [the students and their families] are going through and I just wanted to give back. So I wanted to stay in this district."

While there are many "insiders" who choose to teach in the high-need communities they grew up in, there are not enough to fill all the available teaching positions in those communities. In some cases, schools are unable to find any teachers who are from the community. One small urban district we visited reported that virtually every teacher on staff lived outside the boundaries of the district. Even though this district has a strong record of retaining teachers, they reported that when they did lose teachers, it is almost invariably due to those teachers choosing another district that is closer to their own homes.

Another problem cited by district administrators is that many teachers try to avoid the real or perceived instructional challenges of teaching in a high-need school or assignment. Some of the specific challenges they tend to avoid are teaching English-language learners, students with behavioral issues, or students whose parents are not able to actively support their learning. As a result, many districts serving high-need students face a double challenge: needing to import teachers from other communities and having to find those teachers who are willing and able to take on a challenging assignment.

Of course, districts and schools also vary in the effectiveness of their recruiting efforts. Unfortunately, many of the extra resources that high-need districts had for addressing their recruitment problems have been chipped away in recent years. (See Chapter 2 for more on cuts to recruitment programs.) In particular, Teaching as a Priority (TAP) grants to districts were eliminated in 2003-04. This state program began in 2000-01 and offered districts with API rankings of 1 to 5 block grants to implement recruitment strategies aimed at hiring more credentialed teachers. In previous years, districts reported using this money to strengthen their infrastructure, improve their hiring and recruiting practices, and provide financial incentives to teachers (Shields, et al., 2003). More recently, districts report that the elimination of TAP money has led them to cut back on recruitment efforts. For example, one rural district previously used TAP funds to entice teachers to the district by offering \$2,000 relocation stipends, \$350 for commuting costs, \$350 for classroom supplies, and laptop computers. The district no longer offers any of these incentives. Another district used their TAP grant in past years for relocation stipends and \$1,000 stipends for classroom materials for new teachers. Without TAP funds, this district can no longer offer the stipends or attend out-of-state recruitment fairs. They have even had to limit the number of recruitment packets they create for recruitment fairs. For 2004-05, TAP funds were reinstated as part of the Professional Development block grant, so districts can, if they choose to, resume some of their past recruitment activities. However, because block grant expenditures are not tracked, it will not be possible to know what proportion of funds is being spent on recruitment activities.

Approaches to the Problem

To address the difficulty of recruiting community outsiders, some districts have taken a different approach and developed their own preparation programs that target people who are already working in high-need schools, often as paraprofessionals. These districts aim to “grow their own” teachers rather than trying to attract them from outside. For example, one midsize suburban district works with a local CSU to provide paraprofessionals with the training they need to become fully credentialed teachers. With the help of a grant, the district has credentialed 20 paraprofessionals to date (10 of those in special education); another 9 are finishing up this year. While the program worked well, it will not be continued since the grant money has run out. (See Exhibit 39 for another example of a credentialing program for paraprofessionals.)

Exhibit 39

One District's Efforts to Grow Its Own Teachers

One very large urban district has a longstanding paraprofessional training program. The program is designed to support paraprofessionals pursuing careers as teachers and to guide them towards shortage fields. Applicants are assessed and placed on one of five steps on a career ladder leading to a teaching credential. Once in the program, candidates earn college credits and receive tuition reimbursement and support for the cost of textbooks. (Recent budget cuts have meant that the program no longer can fully reimburse for the full cost of tuition and books.) In addition, candidates receive educational advisement, in-service training, mentoring, test preparation seminars, and hiring assistance. Once candidates earn a credential they are expected to work in the district for a minimum of two years.

The program has been successful in recruiting, preparing, and retaining district teachers. In the past decade, over 2,000 program participants have been hired as K-12 teachers. These new teachers are 89% minority and 60% bilingual. Ninety-three percent of program graduates have stayed as teachers in the district for at least five years. In one school we visited, the principal and many of the teachers were former paraprofessionals, several of whom had taken advantage of the paraprofessional training program. According to the principal these teachers came from the local neighborhood, and were deeply committed to the school and the community.

A related effort is the district's new intern program that recruits fully credentialed general education teachers to become special education teachers. Participants earn an education specialist for mild/moderate disabilities credential. The program is tuition-free, generally takes two years to complete, and culminates in a preliminary credential after a year and a professional clear credential after two years. Courses are held on evenings and some weekends. Because the program is just underway, few teachers have enrolled; however, the district is hopeful that it can attract large numbers of general education teachers to the program. District officials indicated that job security is a major incentive for general education teachers to earn a special education credential, since it appears that special education teachers will always be in high demand.

Preparing paraprofessionals is a strategy that the state has encouraged for years as part of the Paraprofessional Teacher Training Program (PTTP). The program assists paraprofessionals with the costs of teacher preparation and supports them as they progress toward a credential. PTTP has added only about 800 credentialed teachers to the profession since its inception in 1994-95. To its credit, however, the retention rate for those teachers is 99%, probably because of its strategy of finding teacher candidates within the communities that need them and its long-term commitment to those individuals. The program budget for 2005-06 will remain the same as it was for 2004-05, \$6.6 million.

Districts also make efforts to groom their own students to become future teachers. For example, one urban district has a partnership with a local private university in which high school

students are recruited into the teacher preparation program and then return to the district as teachers. Another small urban district we visited gives a \$1,000 signing bonus to credentialed teachers who graduated from any school in the district.

Of course, there are also community “outsiders” who choose to work in high-need schools and districts. Many individuals have a personal commitment to teaching children in high-need settings, and are ready and willing to take on the challenges of such a job. One said, “I like to teach the more impacted kids. I enjoy the challenges. You always have to improve yourself as a teacher.” Another teacher who was discouraged by other professionals from taking a job in a high-need school said she ultimately accepted the position because “I’m not the type to walk away from a challenge.”

Some districts have also found they can increase the likelihood of finding a well-matched teacher by hiring for specific schools, rather than hiring teachers at the district level and then placing them into schools as they are needed (a regular policy in some districts). One principal in a midsized urban district reported that he far preferred his district’s policy of hiring for a particular school, saying that he is better able to assess a potential teacher’s “fit” with the school that way. Another principal in a small rural district reported that he requires all candidates to come to the school for an in-person interview in order to get a feel for the school culture, the district, and the community. This principal reported that he has not had good experiences hiring people who have never visited the school.

Finally, some high-need districts rely on strong leadership and the power of persuasion to find qualified teachers and convince them to take jobs in their schools (see Exhibit 40).

Exhibit 40 Finding and Recruiting the Right Teachers

The superintendent of one small district in a low-income agricultural area is especially proactive in recruiting and screening applicants in order to find teachers who want to teach high-need students. A unique feature of the district's hiring process is a final, 1 to 2 hour interview of each candidate by the superintendent. (Applicants are initially interviewed at the school site by the principal, teaching staff, and classified staff.) According to the superintendent, he is looking to determine whether the applicant is "a match with the district," and he is also making a personal connection to the applicant as a way of encouraging them to accept the job.

The superintendent explained what he does during the interview: "I always ask, 'We are dealing with Latinos, and we know that throughout California you'd find Latinos are the ones getting suspended, taking lower level courses. Why are Latinos disenfranchised?'...I want to know, do these teachers have the guts to do home visits? Will they be advocates for our kids? Our parents don't feel comfortable in our schools. [I ask them] 'Why is that? It is them? Is it us? How would you create environment where parents would feel comfortable coming in?...What would you do extra that you wouldn't have to do at [a school in an affluent area]?' I want to know whether they understand the situation they are coming into."

The superintendent feels that other districts in his part of the county have very low expectations for finding quality teachers because they believe they can't compete with higher-income areas of the county. He disagrees, however, and thinks that a personal appeal from the superintendent can make a difference. He said, "When we started talking about change [reforming the district and schools], I found a lot of teachers wanted to be a part of it. The fact that I interview candidates helps us in the recruiting wars. The questions I ask are stimulating and we find a lot of quality teachers." This strategy is made feasible by the district's small size; it hires only about 12 to 15 teachers each year.

Our case study data (and other research) indicate that high-need schools are at a serious disadvantage in their ability to attract teachers. Many teachers are disinclined to work in these schools, meaning they and their districts must expend significantly more energy on recruiting than more desirable schools and districts. The challenge for high-need schools is to find (or develop) those teachers who have a personal commitment to their students and their community. Even these teachers, however, are susceptible to burnout. The teacher above who would not walk away from a challenge also said, "I told myself I need to go to [this school] and see the reality of schools across California or America. I came here, but I decided that I don't think I want to retire here. It's hard. It's a lot of hard work....Here I go home and I'm exhausted at the end of the day. I work a 10-hour day and then I go home and sleep. I would like to stay at least 5 years here to prove that I can teach here." Clearly, recruiting practices are only one piece of the maldistribution problem; equally important is attending to schools' working conditions to help retain those same teachers. We turn to this issue next.

Working Conditions

While other factors such as salary advancement (discussed later in this chapter) are important, working conditions are commonly thought to have a strong influence on whether teachers choose to remain in high-need schools. Furthermore, a school or district's working conditions, good or bad, can shape its reputation, and thereby play a role in recruitment as well. "Working conditions" can encompass a variety of factors that work to attract or repel teachers from particular schools or districts. Some originate at the district level, including the general climate and functionality of the district, and teachers' sense of job security. Others are based at the school level, including collegiality among teachers, school leadership, and the availability of formal and informal support, especially in the form of mentors. A full discussion of these issues is beyond the scope of this study. Instead, we briefly describe these conditions and how they may impact a school's ability to attract and retain teachers. We follow this with examples of practices that appear to be improving working conditions and which may ultimately improve teacher recruitment and retention. It is important to recognize that these various factors exist in combination, working together to encourage or discourage teachers from accepting positions—and staying—in high-need schools.

Our case studies indicate that the functionality and fiscal health of a district office can have a significant impact on its ability to attract and retain teachers. One small urban district we visited is just now recovering from a long-standing reputation as a dysfunctional, difficult district. A district administrator explained, "We had been a dysfunctional district for so long, so you have a couple of dynamics that happened here. Number one, we couldn't get teachers to come in. [Number two], when you're dysfunctional, you have poor teachers who can hide out, because there's so much chaos going on that nobody really looks at [them] as a bad teacher." Another urban district, in the midst of a major fiscal and leadership crisis, sent layoff notices last spring to almost two-thirds of the teacher workforce. Because the district kept poor records of teacher qualifications and district administrators were not sure which programs might be cut, they sent the warnings to far more teachers than were actually laid off. Although the district ultimately rescinded nearly all of the layoff notices, the action caused widespread discontent among the teaching staff. An administrator in a nearby district reported that her district has benefited from the financial instability and chaos in the first district. She said, "I think I was losing teachers to [that district] in the past but that is not the case now.... This year I'm getting candidates from [that district]." Unfortunately, several districts across the state have resorted to teacher layoffs in recent years in an effort to balance their budgets. We found that even in districts where teachers are generally happy with working conditions pink slips and layoffs have had a dampening effect on teacher morale.

At the school level, leadership can have a substantial impact on working conditions, particularly as teachers in high-need schools face the dual challenge of instructionally challenging student populations and increased accountability pressures. At one school in a very large urban district, staff members reported a lack of support from site leadership, particularly as

they struggle to improve their students' academic performance on the High School Exit Exam. One teacher said, "I feel completely unappreciated....[At a recent meeting] we got the first results from CAHSEE, and we improved from last year [by 8%]. That's my baby. We know what's working. [Then the] principal walks in, doesn't say anything. No handshake. Do you want to work for someone like this?...People are leaving because of the leadership and people stay because of the leadership. It's not the inner city, it's the leadership they put in the inner city." From this staff member's perspective, the lack of leadership and support on campus could contribute to increased teacher turnover in the near future.

Another important aspect of working conditions, particularly for new teachers, is the availability of informal and formal support. In some schools, informal support from other teachers is nearly nonexistent, either because the culture of the school does not encourage it or because there are too few experienced teachers to offer it. In one midsize urban district, for example, a department chair commented frankly that new teachers "have to seek people out....I don't have time to go into a teacher's room to ask how things are going....Teachers who don't know how to ask for help, they do not get it." At one suburban school, there are only two experienced special education teachers to mentor five new teachers, a particular problem because BTSA support providers typically don't have a special education background. The special education department chair said she informally mentors three teachers this year, "and it is too much....The hardest thing is finding time to meet with new teachers." The lack of experienced teachers to informally mentor others is likely a problem more often found in high-minority, high-poverty, and low-performing schools, since these schools have greater concentrations of new teachers.

BTSA, the state's formal support program for new teachers, does not explicitly address the maldistribution problem. (See Chapter 2 and Appendix A for more information on BTSA.) It provides the same level of support to all new credentialed teachers in all schools; high-need schools do not receive any additional resources. Furthermore, two key issues prevent high-need schools from benefiting from BTSA as much as more desirable schools, and make the program of little use in counteracting the maldistribution problem. The first is the availability of experienced support providers to serve as mentors. The second is BTSA's eligibility requirements.

Teacher reports about the usefulness of BTSA vary significantly, often depending on the quality and availability of support offered by the teacher's assigned support provider (also see Shields, et al, 2003). In many high-need schools, there is a disadvantageous ratio of experienced teachers to new teachers. There simply are fewer veterans on staff to fill all of the available leadership roles, such as department chairs, grade-level chairs, instructional coaches, master teachers (for student teachers), and support providers for the Peer Assistance and Review (PAR) program. With a smaller pool of experienced teachers to draw from, high-need schools are harder-pressed to provide the highest-quality support to new teachers.

High-need schools are also disadvantaged by BTSA's eligibility requirements. BTSA provides support for all fully credentialed teachers, but was not designed to support teachers without full credentials, such as interns. Instead, interns should receive support from the intern program they are enrolled in. Case studies from this year and prior years, however, indicate that the instructional support interns receive from their programs is in some cases sorely lacking or entirely absent. One intern described how she gets little support because of her credential status: "I'm supposed to have a support provider for my internship, but I haven't seen much of her. I didn't qualify for BTSA because I still have an internship." A department chair explained the fundamental problem with BTSA's eligibility rules: "[The BTSA support providers] can't support new teachers who may need the most support." As described earlier in the chapter, interns tend to be concentrated in schools serving high proportions of minority, poor, and low-performing students.

Approaches to the Problem

Districts can do many things to improve working conditions. In one district we visited, a new administrative team has been in place at the district level for about 4 or 5 years, and is working hard to attract highly skilled new teachers and improve the skills of its veteran staff. In addition to implementing a consistent instructional focus, the district has been able to maintain financial stability even in the past few years when surrounding districts have been forced to make layoffs and cut-backs. Together these efforts have helped to turn around the reputation of the district and make it more desirable from teachers' perspectives.

At the school level, dynamic principals can empower teachers and encourage them to stay in challenging assignments. For example, one urban school serving 66% English learners has experienced very low turnover during the 15-year tenure of its principal. Instead, teachers praise her for establishing a collaborative, collegial environment at the school, and treating them as professionals. Teachers in this school uniformly reported that they do not want to leave the school—despite its instructional challenges, they feel supported and appreciated.

A related issue is the overall professional culture on campus. Some schools have structures in place that encourage teachers to collaborate frequently on instructional issues and offer a great deal of informal support to each other. For example, at one high school in a small suburban district, teachers nearly unanimously praised their school's strong collegial environment, particularly the willingness among faculty members to observe each other and share instructional strategies. One said, "Teachers [here] are willing to have you come into their classes to observe them. I never get the feeling that someone wants to keep their ideas to themselves. I have a lot teachers whom I consider mentors. They improve my teaching. Teachers have come in to observe me. I always sit down with those teachers and talk with them about their feedback." School administrators support this practice by providing substitute teachers to cover teachers' classes while they observe their peers. Several teachers at this school reported that its positive working environment helped to recruit them and helps to keep them there, something that is

critically important given the district's weak pay scale and mediocre reputation. One said, "I wouldn't say anything attracts people to this district. It doesn't have good reputation in the area, [and there's] not a good pay scale. [But this school] has a really good reputation." Another said, "it's not the money, it's the teachers. There's a clear strong impression I had when I got here and still do that teachers here universally want to make education better and want to be better teachers. That is not true at other schools." About teacher retention, one veteran said, "Over the course of the 32 years I can count on one hand the people who have left this school in a huff.... People are happy with the working conditions and stay. It isn't because the money. Our district doesn't pay as well as other districts. We are a middle tier district."

Some schools also have strong informal and formal supports geared specifically to new teachers. In some schools, new teachers are paired with experienced teachers in their department or grade level (in addition to their BTSA mentor). At one suburban high school we visited, a beginning teacher said, "Our department's informal mentoring and support for new teachers includes a lot of observations and a lot of one-on-one meetings where something is actually done with those observations, instead of saying, 'Okay, here are my observation notes, do with them what you will.' There are a lot of meetings at lunch, e-mail exchanges, and going off campus and talking about what the teacher has done well and what might still need improvement." This kind of informal support can also compensate when new teachers cannot access formal induction activities offered by BTSA. An intern teacher at this school who did not qualify for BTSA said, "The support I get here is from my colleagues. That has been the strongest and most important part of being here....It's a really supportive environment as far as collegiality. That's made a big difference for me." Formal mentors assigned through the BTSA program can also make an impact. As one new teacher said, "I have a really good mentor....If I could have him in my room all the time, that would be great....There is a new teacher induction program with a bunch of seminars—it's ok. [But] the one-to-one with [my support provider], that's worth everything."

In high-need districts, any combination of the above conditions can work to help keep a qualified teacher or drive them away. Furthermore, these working conditions combine with a teacher's salary and benefits, creating a total package that either is enough to attract and keep teachers in high-need schools, or is not. We turn next to the issue of financial compensation.

Compensation Policies

Our case studies indicate that salary plays a different role in every district, depending on the salary scale itself, the working conditions in the district and its schools, and the needs of the individual teachers who make up that district's workforce. In districts that offer relatively low salaries, the impacts on teacher recruitment and retention appear to vary depending on what else the district has to offer. In places with desirable working conditions, the district's reputation may be enough to attract good teachers, and teachers may stay despite low pay if they feel especially supported and appreciated. In one rural district, the salary schedule tops out after 10 years of service in the district and it is commonly known that teachers could earn \$5,000 to \$10,000 more

if they taught in one of the surrounding areas. Health benefits have also been cut recently, and no longer offer an option to cover all family members. The district has lost some teachers due to salary, but most have stayed because of the good working conditions and strong parent support in the district. In another district, a district administrator who reported drawing “pretty good teachers” because “we have a lot of teachers who were students here, who grew up here” also acknowledged that “salary is one of the reasons why teachers move.” She noted that they are located near several Basic Aid districts that pay more. In fact, a neighboring Basic Aid district offers substantially higher salaries, starting at over \$48,000 compared with \$37,000, and topping out at over \$95,000 compared to \$79,000.

Districts offering low pay and less desirable working conditions have little to offer, making recruitment and retention an ongoing struggle. Districts may further hinder their recruitment efforts if they limit the number of years of experience that incoming teachers can apply towards placement on the salary scale (see Exhibit 41). Even when low-paying districts are able to fill their classrooms with credentialed teachers, they may be drawing from a smaller pool of individuals who have lower individual salary requirements. Given the evidence that many teachers are inclined to avoid high-need schools, these schools simply cannot afford to limit the pool of potential teachers any further.

Exhibit 41

Compensation for Experienced Teachers Who Transfer

One common barrier to teachers transferring across districts is a limit on the number of years of experience that are counted toward placement on the salary scale. This is especially important for teachers nearing retirement who want to maximize their final annual salary because it will be the basis for their retirement benefits. This issue does not necessarily contribute to the maldistribution, but it may discourage midcareer teachers from transferring into high-need districts where they are most needed.

In one suburban district, teachers transferring from other districts are given a maximum of 11 years of credit on the salary scale. One incoming teacher with 22 years of experience said, “I didn’t realize how bad it is to leave districts. I thought I’d be able to get credit for my years.” Another teacher and department chair described it as “the biggest bugaboo in the world,” saying, “teachers come in with 12 years and aren’t given credit for years spent elsewhere....it seems that if you want to attract people, you at least have to give them credit for years of experience.”

A related issue in this district is its “longevity” bonus program to encourage veteran teachers to stay in the district. Previously, teachers had to teach for 17 years in the district in order to qualify for annual bonuses of \$2,350 and up. Recently, the district changed this policy so that incoming teachers can count their years of experience acquired in other districts. Administrators in the district’s human resources department are hopeful that this change will help them attract experienced teachers.

An ongoing obstacle to teacher recruitment and retention in California are the high housing costs. Districts frequently cited this as a reason for losing teachers to other regions of California as well as other states. A teacher in the costly Bay Area explained it this way: “The draw is ‘I want a home.’ They move to the Central Valley....It’s very sad to see so many people go.” Bay Area districts are not the only ones facing this problem, however; districts along the Central Coast also report having trouble retaining teachers due to the high cost of living. Even districts in the less-expensive parts of the Central Coast report losing teachers to more affordable counties in central and northern California, or to other states. And even districts in the Central Valley—an area often perceived as having lower housing prices—are experiencing the effects of rapid growth in housing costs around urban centers. Like their counterparts along the coast, district administrators in these Central Valley areas also complain that housing prices are a deterrent to recruiting teachers from other regions and states. Of course, all schools within a high-priced region are impacted by housing prices. For hard-to-staff schools (especially those with relatively low salary schedules), it is just an additional obstacle they face to recruiting and retaining the teachers they need. If struggling with other problems such as dysfunctional central offices or poor school-level working conditions, low-paying districts in these areas will face an uphill battle to staff their high-need schools.

Approaches to the Problem

Clearly, the core approach to addressing compensation issues is to raise teacher pay. Salaries cannot compensate for all other problems, but we did find that in high-need districts, relatively high salaries can help with recruitment and retention. For example, one urban district we visited has a dysfunctional central office and is mired in a budget crisis. Schools in this district are not considered highly desirable for a variety of reasons, including challenging student populations. However, the district offers good benefits and one of the most generous compensation scales in the county. (Beginning teachers start at nearly \$43,000 and can earn nearly \$68,000 by the 12th year of teaching. The top end of the scale is nearly \$87,000.) Without their compensation package, this district would likely have much more difficulty recruiting and retaining teachers than it does. As it is, the high salaries are not enough to keep everyone; the district does lose teachers who are fed up with the working conditions or, in the last year, the district's practice of pink-slipping teachers due to budget uncertainties.

A very different district in a growing rural area also offers relatively high salaries. (The salary schedule tops out at over \$83,000, compared to \$52,000 and \$75,000 in two neighboring districts.) In addition, the district provides health benefits to retirees up to the age of 79—the only district in the area to offer such benefits—and year-for-year service credit to experienced math, science, and special education teachers who transfer from other districts. While the compensation package has not solved all of its staffing issues, district personnel believe that it has “slowed the exodus” of teachers into bigger cities that would happen without the financial incentives. It may also have helped with recruitment by drawing a few teachers from outside the area who otherwise would not have considered the district.

As described in Chapter 4, there are a few districts that offer extra financial incentives, such as signing bonuses and relocation costs, for teachers in shortage subject areas. However, these efforts are relatively rare and limited in scale.

To address problems associated with the high cost of California living, some local communities are working to provide more affordable housing for teachers. In a high-cost suburban area, the city sponsors a program that provides deferred payment loans to teachers to assist with the purchase of a home. One teacher said she used to commute three hours a day until the program allowed her to purchase a home in the area. “I would never have been able to buy a home without this program. I’m super appreciative. I want to stay in [this area] forever.”

Since 2000, the state has supported the Extra Credit Home Purchase Program to help high priority schools (API ranks 1–5) attract and retain teachers. The program offers deferred-payment loans for down payments (up to \$7,500 or \$15,000 if the house is in a designated high-cost area), and teachers who continue to work for 3 years in a high priority school can incrementally reduce the interest to 0%. In addition, the program offers special reduced interest rates on 30-year home loans. The program has assisted with about 1,000 home purchases in the last five years (CalHFA, 2005).

Other past state efforts to address teacher compensation have included guaranteed minimum salaries for beginning teachers, personal income tax credits, and bonus pay for teachers in low-performing schools that meet annual API growth targets—a program that has since been discontinued (Shields, et al, 2000). A recent senate bill (SB 687, Simitian) attempts to shine a light on how teacher compensation varies by school by requiring that the average teacher salary at each school site be listed on SARC, along with the districtwide average and state average.

Clearly, the issue of teacher compensation is a complex one. In the case study districts, salary did not emerge as a singular factor that clearly attracted or repelled teachers. When it did influence teachers' decisions, it was in combination with other factors such as working conditions. For high-need districts that have few other attractive features, higher salaries may be enough to encourage teacher candidates to consider it, and once there, to stay.

Hiring and Placement Practices

It is clear that high-need districts struggle to staff their classrooms. When these districts are plagued with other significant problems—dysfunctional central offices, budget crises, hiring delays—the task is even harder. If anything, high-need districts need a more streamlined hiring process than their competitors, yet too often they are struggling simply to avoid delays and keep the process moving. At least two major factors can lead to significant delays in hiring: insufficient budget and enrollment data, and delays in processing internal transfers. These delays can push districts to hire at the eleventh hour, or even after the school year has started, making it nearly impossible to find desirable, fully qualified candidates who have not already found a job elsewhere. Certain collective bargaining provisions can also increase delays, and within a given district, may also facilitate the movement of more experienced teachers to more desirable schools. Together with the other factors described above, these problems can combine to exacerbate the concentration of novice and underprepared teachers in certain types of schools.

To know their hiring needs and capabilities, districts require several pieces of information, including student enrollment levels and budget levels. Most California districts heavily rely on state funding for the bulk of their operational budgets. However, the state budget tends to fluctuate from year to year, creating uncertainty with regard to available funds. Further, the state budget is often delayed. Such budget delays at the state level impact district hiring. Districts cannot commit to a certain level of staffing until they have a secure sense of available funding. One small district reported that its busiest months for hiring are August and early September. The district's human resources coordinator acknowledges that this is "last-minute," but says that she is held up by uncertainty about the amount of funding available for staffing each year. "It's because of the budget," she said, "It hasn't allowed us to know exactly how much money we're going to have."

For many districts, estimating student enrollment each year, and consequently the number of teachers needed to serve them, is another difficulty. Correctly estimating the number of students to be served in the following year is a complex task, and challenging even for well-functioning districts. Districts with insufficient personnel departments or data systems are in much worse shape. One urban district, for example, has a highly disorganized personnel department with poorly kept records of its current teacher workforce. When setting its hiring goals, this district arbitrarily assumes a 3% decline in student enrollment, despite the fact that the district's enrollment has been steadily growing for the last 4 years. Consequently, the district chronically underestimates its staffing needs, forcing it to search for teacher candidates long after the most qualified candidates have been hired elsewhere.

Hiring timelines can also be delayed by certain bargaining agreement provisions, such as requirements for internal postings. Collective bargaining agreements, which are locally negotiated and agreed upon by school boards, district administrators, and teacher associations, typically require that open positions be posted within the district before they are made available to outsiders. Administrators in case study districts reported that it often takes several weeks to post positions internally, process transfers, then, in some cases, have a second or even third internal posting of the new positions that open up—a particularly frustrating occurrence when it results in the movement of only a few teachers. District administrators argued that the longer they take to identify specific vacancies and make them open to the public, the smaller and lower quality the pool of candidates who are still available to take those jobs. Other research (Levin and Quinn, 2003) has found that substantial numbers of teachers withdraw their applications from hard-to-staff urban districts, the majority of whom cited the late hiring timeline as the primary factor for accepting a job elsewhere. Making matters worse, the applicants who withdraw from the hiring process are stronger applicants on average. A district's least desirable schools are the most likely to be affected negatively by hiring delays, and also the least likely to benefit from the shuffling of teachers that results from the internal post-and-bid process (this issue is discussed further in the last section of this chapter).

To counter this problem, some districts begin hiring before knowing their precise needs. There are drawbacks to this strategy, however, such as the possibility of overhiring, or hiring the wrong type of teacher. Another drawback is that applicants cannot be offered a specific position, something that many teachers report is important in making their decision about where to take a job. If applicants are not offered a specific position, they may balk at the offer and take a job elsewhere. For example, one special education teacher described how a district interviewed her at a recruitment fair and made an offer on the spot, but was vague about the specific position and school. In contrast, another district called her for an interview, but “knew exactly what school. I could check it out, talk to the principal and vice principal. It was more secure, a set deal.” She took the second offer, saying “it was the position” that made the difference. Several other teachers in this district reported that knowing their assignment was a key factor in choosing to take the job.

Some collective bargaining agreements may also have provisions about teacher transfers within a district that unintentionally contribute to within-district maldistribution. Most bargaining agreements give some kind of seniority-based priority in the transfer process, and some of them may facilitate the movement of more experienced teachers to more desirable schools. In one district, for example, seniority is the sole determining factor for selecting among transfer applicants. Over time, such a policy could lead to a concentration of experienced teachers in the most desirable schools and chronic turnover in the least desirable schools. More commonly, seniority is used as a tie-breaker to decide among transfer applicants who are otherwise equally qualified.

Policies governing involuntary transfers may also disadvantage the least-desirable schools in a given district. Due to shrinking enrollments or other issues, districts occasionally have to reduce the teaching faculty at a given school. Districts may first seek volunteers, but most contracts dictate that if a transfer is involuntary, the least senior teachers will be the first to go. The schools most likely to have open positions are those with the highest turnover, typically the higher-need schools in the district. These are also the schools that teachers are least likely to volunteer to move to.

More important than the above issues may be that districts have few levers to correct an imbalance in staffing once it has occurred. An administrator in a small urban district explained it this way:

You know the phenomenon: younger teachers are going into the more challenging schools and the reason is not because the district is placing them there, it's because of my contract. I can't move anybody out across town, [from] an affluent school [into a more challenging school] to balance the new teachers, to diversify that [school]. I've got to put [the new teachers] where the openings fall out.

Another suburban district administrator explained how he has few options for making his most challenging high school more attractive. This high school houses the district's EL programs, is low-performing, and has a high minority student population compared to other schools in the district. He says:

It is harder to staff [one of our schools], but I focus on [that school]. I don't have monetary incentives I can offer teachers to go to specific schools....I would have to negotiate that and I don't know that I would be successful negotiating differential pay. Most unions want benefits for all, not a select group.

Administrators may be aware of the inequitable distribution of teachers across schools, but find themselves unable to find a workable solution within the confines of the bargaining agreement.

Approaches to the Problem

Despite the array of barriers to effective hiring, some high-need districts do take action to positively impact on whether teachers will take a particular assignment in a high-need school. First, some districts have effectively tackled the basic problem of insufficient data. For example, one small urban district with a high EL population goes to great lengths to estimate its future student enrollment and hiring needs. In consultation with hired demographers, its business department runs projections each year, taking into account local building and housing trends, and 5-year enrollment patterns in their own schools as well as feeder schools. In addition, the district monitors how many teachers reach retirement age each year and how many come to the district's retirement workshop. The HR director feels they can be fairly accurate, though he acknowledges it can be difficult to track the most mobile segment of their student population. Even with this degree of effort, mistakes can be made. At one of the schools in the district, the principal complained that the district is sometimes too conservative in its hiring estimates and that schools occasionally have to scramble to fill needed positions when school opens in the fall and more students arrive than were predicted.

Other districts have made technical improvements to their infrastructure to streamline the hiring process. One large urban district has made technical improvements in its human resources department and greatly increased its efficiency. During the 1990s and early 2000s, applicants to the district spent long stretches of time waiting for an initial response and for processing once they were hired. Applicants now apply on-line and the HR office generally replies to applicants within 24 hours. Along with aggressive recruitment practices and early contract offers, the district has been able to reduce its reliance on hiring emergency teachers. The system is not perfect and the district is still struggling to find credentialed teachers for some schools and content areas, but it has been recognized with national awards for its improvements.

One large urban district has addressed the problem of hiring delays caused by the internal post-and-bid process. This district has designated "priority staffing schools," schools in which more than 30% of teachers, for 2 or more consecutive years, have not reached their second year of permanent status. According to the contract, "Such schools are typically characterized by a higher-than-average turnover rate and a lower-than-average response to positions available during post and bid periods." Positions in priority staffing schools are supposed to be posted earlier than positions in other schools, and if the positions are not filled within the district, they can be "filled by non-district employees provided that such employment does not result in the layoff or excessing of a current bargaining unit member." This provision may give hard-to-staff schools a jump on identifying open positions and filling them with credentialed teachers.

While transfer policies and notification requirements in collective bargaining agreements do tend to work against the equalization of qualified teachers across a district, as described above, some unions and districts have bargained innovative agreements that instead begin to work toward a more equalized teacher workforce. One very large urban district has a policy to encourage experienced teachers to teach in high-need schools. This district's "continuous

service” agreement annually guarantees transfers for 75 teachers who have taught for 8 consecutive years in a high-need school,¹ and 75 teachers who have taught for 4 consecutive years in a non-high-need school but are willing to take a position in a high-need school. Continuous service transfers are given the highest priority for transfer, and the district will even displace teachers if necessary to accommodate them.

This district also has a Teacher Integration Transfer Program, which aims to have each school’s proportions of minority and nonminority teachers roughly mirror the districtwide proportions. All types of transfers are subject to this policy and will not be approved if they “adversely affect teacher integration.” (The policy does not impact hiring, however.) The district can transfer volunteers and nonvolunteers to meet the goals of teacher integration. Schools are allowed some flexibility, though, for bilingual and other special needs. Though this kind of policy does not guarantee that all students have equal access to qualified and effective teachers, it does focus attention on the way teachers are distributed across schools in a district.

Problems with insufficient data and hiring delays are barriers to correcting the maldistribution of underprepared and novice teachers. Furthermore, some provisions of collective bargaining agreements unintentionally disadvantage districts’ least attractive schools. While a few districts have initiated somewhat progressive practices and policies to address the problem of within-district maldistribution, they are few and far between. If teacher shortages return (as predicted), high-need districts will suffer even more from the effects of their outdated systems and problematic policies.

Conclusion

Though progress has been made, California has yet to eradicate the maldistribution of teachers. Students in schools serving high proportions of minority students or English learners, and students in low-performing schools, are still considerably more likely to be taught by an underprepared and/or novice teacher. There are several factors that contribute to this, ranging from district recruitment practices, to working conditions and compensation policies, to hiring practices and transfer provisions in bargaining agreements. Given the projections described in Chapter 3, the maldistribution problem may well worsen over time. The problem is complex, and the solution to it will need to be comprehensive and multifaceted. In the next chapter, we summarize the findings from this and previous chapters and present a series of recommendations for policymakers’ consideration.

¹ Defined in the contract as a Title I or Urban Impact I school.

7. Conclusions and Recommendations

This final chapter reviews the study's main conclusions and follows with a series of policy recommendations from the Center for the Future of Teaching and Learning.

Conclusions

California faces a formidable challenge in raising student achievement to meet the state's agreed upon standards. The standards are rigorous, and many of the state's students face considerable obstacles to meeting them, including in many cases poverty and a lack of proficiency in English. In its efforts to address lagging student achievement, California policymakers have built a strong system of standards and accountability. At the same time, they have made many efforts to improve the caliber of the teacher workforce, by increasing the production of new teachers, boosting recruitment efforts, and focusing attention on teacher qualifications. These efforts appear to have had a positive impact on the workforce, as have changes in the overall economy and labor market. The number of underprepared teachers has decreased substantially, and those that remain increasingly hold intern certificates or credentials rather than emergency permits. At the local level, districts too are working hard to bring all teachers into compliance with the teacher quality requirements of No Child Left Behind (NCLB).

Despite this progress, however, significant problems remain. As described in Chapter 4, 20,000 California teachers are still underprepared, meaning they have not met the state's minimum requirements for a preliminary credential. Of these, 10,000 hold emergency permits or other authorizations that do not meet the requirements of NCLB. The internship route is becoming further institutionalized as an acceptable route through teacher preparation, despite the fact that it places inexperienced teachers in the classroom, in many cases without adequate supervision, before they have completed their training. The number of interns jumped 64% in the last 3 years for which data are available. Certain subject areas, including math, science, and special education, continue to be especially hard to staff. In some cases, the shortages are alarming: nearly half of first-year special education teachers are underprepared.

Even when policy-makers and practitioners succeed in getting fully credentialed teachers into classrooms, the teachers are not always well prepared for their particular assignments. As described in Chapter 5, fewer than half of all teachers with more than 5 years experience hold an authorization to teach English learners, yet many of them are held responsible for helping EL students meet the state's standards. Similarly, in many high schools, teachers are fully credentialed but assigned to one or more classes for which they do not have the appropriate subject-matter background. In some subjects, as many as 12 to 15% of teachers are teaching "out of field." Last, novice teachers are often given the most difficult assignments—an accepted tradition in some schools, and one that is sometimes unintentionally exacerbated by bargaining agreement provisions and other factors that delay hiring.

Finally, Chapter 6 describes how California has yet to eradicate the maldistribution of underprepared teachers—a problem that is compounded with substantial numbers of novice teachers in all types of schools. Poor and minority students, as well as low-performing students, are considerably more likely to be taught by an underprepared and/or novice teacher. They are also at risk for facing multiple underprepared, novice, or out-of-field teachers throughout the course of their academic careers. There are several factors that contribute to this unfair distribution, ranging from district recruitment practices, to working conditions and compensation policies, to hiring practices and transfer provisions in bargaining agreements.

Given the projections described in Chapter 3, the maldistribution problem may well worsen over time. In the coming years, the state will have to contend with large-scale teacher retirements and an increased demand for secondary teachers. Beyond just the sheer volume of teachers expected to depart the workforce, policymakers must also contend with the loss of leadership, knowledge, and experience the retirees will take with them and the challenge of helping their replacements fill the void.

Unfortunately, schools and districts, particularly chronically low-performing and hard-to-staff ones, will likely struggle to meet the needs of new faculty and their high-need student population. As described in Chapter 2, the state investment in recruitment and professional development programs has been significantly reduced in recent years due to ongoing budget problems, and enrollments in teacher preparation programs are on the decline. The state appears less prepared to manage the supply-demand crunch looming on the horizon than it was during the previous decade when it had the resources to recruit, prepare, place, and develop large numbers of teachers. Meanwhile, in the aftermath of the *Williams* lawsuit, the public is looking more closely at the way education resources, including teachers, are distributed. At the same time, NCLB has introduced a federal presence into the definition and monitoring of teacher qualifications. And while NCLB and the *Williams* case have added to an already high-stakes accountability environment, they may not contribute the resources necessary to ensure that their requirements can be readily achieved by students, teachers, and schools.

Recommendations

Though daunting, the challenges described in this report need to be addressed now. The pressure to improve student achievement has never been greater, and any successful approach to the problem will unquestionably require attention to the state's teacher workforce. This point in time marks an opportunity for California: the state is recovering from the acute teacher shortages of recent years and has a brief reprieve before a boom in retirements leads to a likely return of widespread teacher shortages and aggravates the existing maldistribution. Clearly, this is the time for decisive and courageous action in pursuit of a highly skilled teacher for every child in California. The Center for the Future of Teaching and Learning recommends the legislature and governor take the following actions:

Ensure that all teachers who enter the classroom have a thorough knowledge of the subject matter assigned and possess the pedagogical skill required to teach all children.

- Reinststate, adequately fund, and strengthen programs to place fully prepared teachers in the classroom. Combine the provision of the Assumption Program of Loans for Education (APLE) and the Governor’s Teaching Fellowship to create a comprehensive program of grants and loans to prospective teachers to cover costs associated with tuition, materials, and living expenses for those agreeing to accept four-year assignments at a school in the lowest quartile of the API.
- Decrease the number of interns serving in low-performing schools. Revise the California education regulations to ensure that all novice teachers are provided a high level of supervision and support. Provide sufficient funding to ensure that intern teachers successfully complete supervised student teaching prior to taking full responsibility for a classroom.
- Expedite the credentialing process for California-prepared candidates, and others as appropriate, by consolidating separate, mandated assessments in basic skills, reading instruction, and subject matter. Remove all barriers to California licensure for out-of-state candidates who hold full credentials and meet California teacher fitness standards.
- Expand the capacity of the Fiscal Crisis & Management Assistance Team (FCMAT) to assist school districts to improve and adapt current hiring and transfer practices that place high-need schools at a disadvantage in attracting fully prepared, experienced teachers.
- Eliminate overlap in the intern and BTSA programs to promote a coordinated and coherent effort to bring novice teachers into the profession.
- Coordinate and streamline requirements for special education teachers, and provide apprenticeships that pair an experienced, accomplished teacher with no more than two novice teachers.

Ensure that all students have equitable access to teachers who are fully prepared, experienced and appropriately assigned.

- Reinststate the statutory provisions governing the Teaching as a Priority (TAP) program that provides targeted resources for districts to attract teachers to high-need schools and challenging assignments. Include monetary and nonmonetary incentives for teachers commensurate with additional or extended responsibilities associated with assignments in high-need areas. Funding priority should be given to those schools in the lowest quartile of the API.
- Ensure that schools identified for improvement under NCLB and in the bottom two deciles of the API receive supplemental funding sufficient to effectively address working conditions, including school leadership and professional development.

- Allow school site councils in low-performing schools the flexibility to use class size reduction program funds in combination with Professional Development Block Grant funds to target specific staffing needs, such as incentives to extend the professional teaching year to provide training in working with English learners and in accommodating special needs students in general education classrooms.
- Eliminate the bureaucratic burden of coursework requirements for credential renewal. Place responsibility for teacher growth requirements at the local level, in compensation and evaluation systems designed by school districts and teachers.
- Provide technical assistance to school districts to plan, in collaboration with teachers, incentive and compensations systems that reflect additional responsibilities and challenging assignments, such as assignments at low-performing schools or in high-need subject areas.
- Attract and retain accomplished, experienced teachers at schools in the lowest quartile of the API by providing districts with funding to subsidize teachers to obtain National Board Certification. Require these teachers to provide support, supervision, and assistance to novice teachers in low-performing, hard-to-staff schools and in shortage areas such as special education.
- Provide competitive grants to districts, consortia of districts, or regional collaborations to establish summer institutes and to provide stipends for underprepared eighth grade Algebra I teachers serving in schools in the bottom quartile of the API.
- Provide resources to local districts, within the Professional Development Block Grant, for programs that accelerate the development of instructional skills for experienced teachers who lack the skills necessary to assist English learners in acquiring English and academic content.
- Expand the Mathematics and Reading Professional Development Program to include professional development opportunities for teachers of life and physical sciences in grades K-12. The professional development should be designed in consultation with accomplished teachers recommended by the California Council on Science and Technology, the California Science Project, and the National Academies of Science, Technology, Engineering and Medicine.
- Remove any remaining barriers, including financial disincentives, for retired teachers and administrators willing to serve in high-need schools, either full-time or part-time. At the regional level, establish pools of retired teachers to take single class assignments in middle and high school shortage areas.

Ensure that policymakers have a data system that allows adequate monitoring of state efforts to provide equitable access to fully prepared and experienced teachers.

- Establish a statewide data system that provides, on a timely basis, accurate information on California's teacher workforce so that policymakers can better predict critical employment trends, as well as the impact of specific initiatives and investments on the teacher development system.
- Charge an independent entity made up of representatives of relevant agencies and organizations to oversee the development of a statewide teacher data system. Data collection should coordinate across agencies to enable the tracking and analysis of recruitment, retention, assignment patterns, and workforce projections, and to comply with state and federal reporting requirements. State policymakers should be provided with analysis of these data annually. Further, the oversight entity should ensure that the standards of individual privacy are upheld.

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Appendix A

Teacher Development Policies

This appendix describes and updates the Teacher Credentialing Block Grant and various state and federal subject-matter, curricula-based, and locally-controlled professional development programs, respectively.

Teacher Induction in California

California's BTSA program has been at the forefront of efforts across the country to support and ease the induction of fully credentialed new teachers into the profession. Local BTSA programs typically provide an experienced mentor to the participant and may involve other supports, such as orientation meetings, opportunities to meet with colleagues, formative assessments, and professional development specific to the needs of new teachers. BTSA has evolved from a relatively small program to an institutionalized part of the state's strategy to improve the quality of teaching and reduce teacher attrition.

Teacher Credentialing Block Grant: BTSA

State policymakers transferred BTSA into the Teacher Credentialing Block Grant beginning in the 2005-06 school year. It is the only program in this block grant at the moment and AB 825 (Firebaugh) prohibits funds from being transferred out for other purposes, unlike the Professional Development Block Grant. The Teacher Credentialing Block Grant changes the way funds are distributed to BTSA by allocating funds through apportionments as opposed to actual grant award letters.

Participation in the BTSA program has stabilized somewhat after years of rapid growth (see Exhibit A-1). Participation grew in the late 1990s as the program expanded, peaking in 2000-01 with approximately 24,000 new teachers. In 2004-05, 22,691 beginning teachers were served through BTSA and the state expects to serve 24,000 in 2005-06 but acknowledges that that number may increase. Over the last six years, the program has served between 20,000 and 24,000 new teachers each year. The fluctuations in BTSA participation have probably resulted from changes in the overall number of beginning teachers in California each year. Since 2000-01, the number of first- and second-year teachers has declined more than 23%, from 46,000 new teachers to 35,500 new teachers in 2004-05.

BTSA's budget has held fairly steady since 2000-01. The budget, which peaked at \$88.1 million in 2002-03, has since experienced a moderate decline as the number of new teachers entering the profession continues to fall. The block grant is funded at \$87.9 million for 2005-06,

an increase of about \$7 million from what BTSA received in 2004-05, or \$3,675 per eligible first-year teacher and \$3,357 per second-year teacher.¹

Exhibit A-1
BTSA Participation, 1992-93 to 2005-06

School Year	Number of Programs	Estimated Number of New Teachers Supported
1992-93	15	1,100
1993-94	30	2,300
1994-95	30	1,900
1995-96	30	1,900
1996-97	34	2,166
1997-98	73	4,118
1998-99	86	12,330
1999-2000	133	22,156
2000-01	146	24,186
2001-02	145	22,253
2002-03	145	21,064
2003-04	149	20,339
2004-05	148	22,691
2005-06	148	24,000 (projected)

Sources: Bartell & Ownby (1994); CTC (1998b & 2001f); CDE (2003h, 2004j, & 2005d); Hickey (2003); Mitchell & Boyns (2002).

Professional Development Programs

During the economically prosperous years of the late 1990s, professional development programs received a great deal of political and financial support from state policymakers. Many of the state's more recent initiatives came into being during this period. Over the past several years, however, the fiscal constraints have greatly streamlined the budgets and goals of the professional development programs. Programs have adjusted to operating in this new financial environment by tapping external funding sources, altering the number of participants, or decreasing the amount spent per participant.

Subject-matter Professional Development Programs

Since the late 1980s, California's policymakers have invested millions of dollars for professional development in specific academic subjects. The state's creation and support of the CSMPs demonstrates the importance policymakers place on content-specific professional

¹ BTSA requires an additional \$2,000 in matching or in-kind funds from districts for each participating teacher.

development. Although this type of professional development funding has been affected by budget cuts, funding from NCLB and the California Mathematics and Science Partnership have helped to compensate for those reductions.

Subject-matter professional development programs, their funding, and participation are described below.

California Subject Matter Projects (CSMPs): Program Description and Update

State policymakers established the CSMPs in 1988 with reauthorization in 1998 under a new organizational structure. Under the leadership of the University of California's Office of the President (UCOP), these projects aim to improve teachers' content knowledge in nine subject areas—writing, reading and literature, mathematics, science, history and social studies, foreign language, physical education and health, the arts, and international studies—and develop teacher leaders.

In recent years, the CSMPs have emphasized greater alignment with California's content standards, a team approach to training teachers, partnering with low-performing schools and districts, provision of content-based literacy activities to teachers of ELLs. The nine projects conduct intensive summer institutes and provide follow-up activities during the school year. The projects will also provide technical assistance to low-performing schools and teachers who do not meet the "highly-qualified" teacher standard.

Budget reductions have resulted in changes in the structure but not the approach of the CSMP. The new RFP (covering FY 2005-08) requires the formation of new organizational structures, including regional councils, to make better use of the scarce funds available to the program. There will be 15 regions that mostly mimic the set-up of the California County Superintendents Educational Services Association (CCSESA) areas of responsibility. This format will allow neighboring regions to share resources as they support school, districts, and teachers. These regions will be led by Coordinating Councils comprised of the site directors of each region. They will be responsible for the following activities:

- Developing a vision for teachers in classrooms serving the students in the CSMP region.
- Formulating a regional strategy to develop a highly qualified teaching force that can implement standards-based instructional programs and raise student achievement.
- Developing strategies to work in a coherent aligned manner to strengthen services to both existing partnerships as well as to schools and districts newly designated by the CDE as priorities for program improvement.
- Giving special consideration to the needs of California's middle and high schools.
- Partnering with other regional organizations to ensure the best possible use of scarce educational resources within the region.

Following 2 years of state funding of \$35 million, the CSMPs' operating budgets were reduced to \$20 million in the 2002-03 budget. An additional \$4.4 million in federal Title II funds was designated for the California Science Project in 2002-03 (see Exhibit A-2). Since 2003-04, the budget has remained stable with \$5 million in state funds and an additional \$4.4 million in federal funds. Those amounts will stay the same for fiscal year 2005-06 (Budget Act, 2005 and UCOP, 2005).

Exhibit A-2
CSMP Funding and Participation, 1999-2000 to 2005-06

Year	Funding (in millions)	Number of Participants
1999-2000	\$15	11,500
2000-01	\$35	25,000
2001-02	\$35	25,000
2002-03	\$20	39,722
2003-04	\$9.4 (includes \$4.4 in federal funds)	42,508 ^a
2004-05	\$9.4 (includes \$4.4 in federal funds)	41,821 ^a
2005-06	\$9.4 (includes \$4.4 in federal funds)	N/A

^a Count includes teachers, district administrators, site administrators, college undergraduates, pre-service teachers, counselors, curriculum specialists, instructional aides, students, parents, and university faculty.

Sources: Budget Act (2005); UCOP (2004).

Title II, Part B—California Mathematics and Science Partnership Program (CaMSP): Program Description and Update

In 2002, Title II, Part B, of NCLB authorized the creation of the California Mathematics and Science Partnership Program (CaMSP). This competitive grant program allows districts serving high-need student populations to partner with mathematics, engineering, or science departments at IHEs to improve student achievement in mathematics and science. The goal of partnering with mathematics, science, and engineering departments is to improve the content knowledge of teachers in those fields (CDE, 2004). Recipients of the grant funds must use the money for California state standards-based professional development of mathematics teachers in grades 5 through 9 and science teachers in grades 4 through 8.

Because funding was late for the 2002-03 school year, the program used those funds (\$13-14 million) for 2003-04. For 2004-05 the state used the \$20.3 million allocated for 2003-04 (see

Exhibit A-3). For 2005-06, the program will receive a \$4 million increase in funding to \$24.3 million.

**Exhibit A-3
CaMSP Funding and Participation, 2002-03 to 2005-06**

Year	Funding (in millions)	Number of Participants
2002-03	\$13-14 allotted, \$0 spent	0
2003-04	\$20.3 allotted, but spent 2002-03 funds instead (\$13-14)	2,800
2004-05	Planning to spend 2003-04 funds (\$20.3)	N/A
2005-06	\$24.3	N/A

Source: Budget Act (2005); CDE (2004k).

Curriculum-Focused Professional Development

In addition to the subject-matter professional development described above, state and federal policies have increased the emphasis on curriculum-focused professional development. California’s Mathematics and Reading Professional Development Program (MRPDP) and the federal Reading First program, for example, provide professional development on specific state-adopted reading and mathematics curricula for the early grades.

The curriculum-focused professional development programs, their funding, and teacher participation are described below.

Mathematics and Reading Professional Development Program (MRPDP): Program Description and Update

AB 466 (Strom-Martin, Shelley) established the Mathematics and Reading Professional Development Program (MRPDP) in 2001-02 to reimburse districts for professional development undertaken by teachers of reading and mathematics. Schools designated as high-priority or low-performing schools are required to provide professional development for their reading/language arts and mathematics teachers. Only providers approved by the California State Board of Education can provide training. The program includes participation in a summer institute and training during the school year that is specific to teachers’ grade levels and their school’s curricular adoption (CDE, 2004).

MRPDP is a 5-year program, with districts reimbursed at \$2,500 per trained teacher and \$1,000 per paraprofessional per year. In 2001-02, the state allocated \$31.7 million to districts for the program but that money was not spent because few districts were prepared to provide training during the first year. The 2002-03 budget allocated \$63.5 million for the program—essentially 2 years’ worth of funding. In 2003-04, the state received requests for an additional \$2 to \$4 million from districts for funding above the \$31.7 million appropriated for the program. The program will maintain its \$31.7 million funding from 2004-05 for the 2005-06 fiscal year (see Exhibit A-4) (Budget Act, 2005).

**Exhibit A-4
MRPDP Funding, 2001-02 to 2005-06**

Year	Funding (in millions)
2001-02	\$31.7 allocated, (No funds spent)
2002-03	\$63.5 allocated (2 year's worth of funding)
2003-04	\$31.7 plus an additional \$2-4 million requested by districts and granted
2004-05	\$31.7
2005-06	\$31.7

Source: Budget Act (2005); CDE (2004).

Reading First: Program Description and Update

Reading First was enacted in 2002 as part of Title I, Part B of NCLB. AB 65 (Strom-Martin, 2002) established the Reading First Plan for California and authorized spending for it. Reading First provides subgrants to districts for improving the reading of students in grades K-3 and of special education students in all grades. Districts provide teachers with training that is specific to their grade level and the instructional program that their school has adopted. Administrators must also be provided program-related professional development as part of the Principal Training Program, enacted by AB 75. Starting in 2003, bilingual classroom teachers could also participate in funded professional development by Reading First (enacted by AB 1485).

California had \$131.6 million to spend on Reading First in 2002-03 (see Exhibit A-5). The state also received a supplemental grant in 2002-03 of \$4 million. Funding in 2003-04 increased to \$142.8 million from nearly \$132 million, due to heightened federal support for the program. Not all of the money was spent in 2002-03 (\$16.5 million) or in 2003-04 (\$12.8 million). The program, which received \$146 million in 2004-05 (excluding the nearly \$30 million from the two previous years), will have a budget of \$152 million, including \$6.5 million carried over from last year, in 2005-06 (Budget Act, 2005). Carry over funds will be used to fund currently nonparticipating school districts.

**Exhibit A-5
Reading First Funding, 2002-03 to 2005-06**

Year	Funding (in millions)
2002-03	\$132
2003-04	\$143
2004-05	\$146
2005-06	\$152

Sources: Budget Act (2005); CDE (2004).

Locally-Controlled Professional Development

Districts receive large amounts of state and federal professional development funds, and decisions about how to spend the money are left to the discretion of the local recipients. PAR and the federal Teacher and Principal Training and Recruiting Fund encompass a range of activities and programs for improving teacher quality at the local level. While a few programs were collapsed under the Professional Development Block Grant, none of the goals or activities were changed. Grant recipients will be required to spend funds according to the programs' previous guidelines.

The district-level professional development programs, their funding, and participation are described below.

Peer Assistance and Review (PAR): Program Description and Update

AB X1 (Villaraigosa) established PAR in 1999 to pay master teachers to help colleagues overcome unsatisfactory ratings on their personnel evaluations by improving their instructional practices. PAR funds can also be used to support districts' BTSA programs, activities previously funded under the Mentor Teacher Program, or any activities that support or train new teachers. Although most districts participate in PAR, the state does not maintain detailed information about the number or type of teachers who receive assistance through the program (CDE, 2004m).

To be eligible for PAR funding, each district and its local bargaining unit had to reach agreement and submit an application for the money by specified dates. PAR was initially funded at \$125 million, and local programs, depending on when they implemented their PAR program, received either \$8,700 or \$6,900 for each of 20 full-time credentialed teachers (see Exhibit A-6). Program funds at the state level were pared to \$87 million in 2002-03, probably resulting in reduced allocations per teacher. Slightly more than \$60 million more was cut from the budget in 2003-04. For 2005-06, PAR received a negligible increase in its budget from 2004-05 to reflect changes in the cost of living (Budget Act, 2005).

**Exhibit A-6
PAR Funding, 2000-01 to 2005-06**

Year	Funding (in millions)
2000-01	\$125
2001-02	\$125
2002-03	\$87
2003-04	\$25
2004-05	\$26
2005-06	\$27

Sources: Budget Act (2005); CDE (2004m).

Professional Development Block Grant: Program Description and Update

The professional development block grant includes the Instructional Time and Staff Development Program (ITSDR), the Teaching as a Priority (TAP) program (this program had not been funded since 2002-03), and intersegmental programs—a combined total of \$249.3 million for 2005-06. The new grant includes both fiscal flexibility and operational restrictions for recipients. Funds must be used for the purposes of the participating programs. The block grant does allow a district or county office of education to transfer up to 15% of the amounts apportioned for the Professional Development Block Grant to any other block grant or categorical program, however. In addition, AB 825 requires that districts with kindergarten through sixth-grade teachers use a percentage (estimated to be 13% of the block grant for 2005-06) of their funds for professional development activities in reading language arts/English language development that are as rigorous as those offered by the Mathematics and Reading Staff Development Program. (CDE, n.d.a)

Instructional Time and Staff Development Program (ITSDR). Designed to improve student achievement in the core curriculum areas, ITSDR reimburses districts for training teachers and paraprofessionals in subject-matter knowledge, teaching strategies, classroom management, conflict resolution, and other topics. The state pays the district for the time of each eligible faculty or staff member who participates in the professional development, up to a maximum of 3 days (CDE, n.d.a).

Teaching as a Priority (TAP). TAP allocates funding to local educational agencies to recruit and retain fully credentialed teachers in API 1–5 schools. Funds may be used for a variety of purposes, including signing bonuses, improved work conditions, teacher compensation, housing subsidies, and funds to offset the cost of examinations or course work leading to certificates to teach English learners (CDE, n.d.a).

Intersegmental Programs: College Readiness Program and Comprehensive Teacher Education Institute. The College Readiness Program seeks to increase the enrollment and completion of Algebra I by all eighth-grade students. The Comprehensive Teacher Education Institute, meanwhile, seeks to develop, research, and disseminate models of teacher preparation and induction (CDE, n.d.a).

***Title II, Part A—Teacher and Principal Training and Recruiting Fund:
Program Description and Update***

In 2002, NCLB instituted the Teacher and Principal Training and Recruiting Fund. This fund provides grants to states and subgrants to districts and eligible partnerships for a variety of activities to improve teacher quality and raise student achievement in core subject areas. The funding can be used to provide professional development activities; support initiatives to recruit, hire, and retain teachers; provide induction activities; implement class-size reduction; and conduct other activities designed to enhance teacher quality and increase student achievement. Districts do not need to report whether they used the money for professional development, recruitment, or other activities (CDE, 2004k).

This program was funded at \$315 million in 2002-03 and \$321 million in 2003-04 (Exhibit A-7). The program will receive \$322.4 million in 2005-06, a slight decline from the \$324.4 million for 2004-05 (Budget Act, 2005).

**Exhibit A-7
Funding for the Teacher and Principal Training
and Recruiting Fund, 2002-03 to 2005-06**

Year	Funding (in millions)
2002–03	\$315
2003-04	\$321
2004-05	\$324
2005-06	\$322

Sources: Budget Act (2005); CDE (2004k).

Appendix B

Technical Information for Selected Exhibits

Chapter 3. Teacher Supply and Demand

Exhibit 3 **California K-12 Teacher Workforce, 1994-95 to 2004-05**

For 1994-95 to 1996-97, total workforce numbers are from the California Basic Educational Data System (CBEDS) historical files. Data for 1997-98 through 2004-05 are taken from DataQuest on the California Department of Education (CDE) Web site.

Exhibit 9 **New Preliminary Teaching Credentials Issued, 1992-93 to 2003-04**

“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 analysis.

Exhibit 10 **New Preliminary Teaching Credentials Issued, by Institution, 2000-01 to 2003-04**

Multiple-subject, single-subject, and education specialist preliminary and professional clear credentials are included; intern credentials are not included. “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).

Chapter 4. Filling the Gap Between Teacher Supply and Demand

Exhibit 11 **Number of Underprepared Teachers, 1997-98 to 2004-05**

Underprepared teachers are teachers who responded on CDE’s Professional Assignment Information Form (PAIF) that they did not hold a “full credential” (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates. All subsequent analyses of “underprepared” teachers use this definition.

Exhibit 14
Number of Underprepared Teachers, by Credential Type, 1999-00 to 2004-05

Underprepared teachers are teachers who responded on the PAIF that they did not hold a “full credential” (e.g., preliminary, professional clear, or 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 17
Percentage of Underprepared Teachers, by Type of Authorization, 1999-2000 to 2004-05

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 did not hold a full credential) is calculated as a proportion of full-time teachers. Teachers can 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 18
Percentage of Underprepared High School Teachers in Assigned Subject, 2004-05

Only full-time teachers in California high schools have been included in this analysis. Teachers who were assigned to a core subject, but lacked a full credential, are identified as underprepared. 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 2004-05 cannot be compared with 2003-04 data in Exhibit 20 in the *California’s Teaching Force 2004* report due to 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 include the restriction this year.)

Chapter 5. Inadequate Preparation for Specific Teaching Assignments

Exhibit 19

Percentage of Fully Credentialed Experienced Teachers with EL Authorization, 1999-2000 to 2004-05

Only full-time teachers are included in this analysis. Teachers with English learner (EL) authorization are those who reported on CDE's Professional Assignment Information Form (PAIF) that they have English language development (ELD), Specially Designed Academic Instruction in English (SDAIE), and/or primary language (BCLAD or equivalent) certification.

Exhibit 22

Percentage of Out-of-Field High School Teachers in Core Subjects, 2004-05

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 2004-05 cannot be compared with 2003-04 data in Exhibit 20 in the *California's Teaching Force 2004* report due to 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 include the restriction this year.)

Chapter 6. The Distribution of Teachers Across California's Schools

Exhibit 26

Distribution of Schools, by School-Level Percentage of Underprepared Teachers, 2004-05

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 Professional Assignment Information Form (PAIF) that they did not hold a "full credential" (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

Exhibit 27
Distribution of Schools, by School-Level Percentage of Novice Teachers, 2004-05

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 1 or 2 years of teaching experience on the PAIF.

Exhibit 28
Underprepared Teachers in Schools in the Highest and Lowest API Achievement Quartiles, 1999-2000 to 2004-05

All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. The numbers of schools included in these analyses vary each year because of differing numbers of schools and differences in the completeness of the data sets (see table below). Underprepared teachers are teachers who responded on the PAIF that they did not hold a “full credential” (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

Number of Schools, by API Quartiles, for API Analyses

API Quartiles	2000-01	2001-02	2002-03	2003-04	2004-05
Highest achievement quartile	1,646	1,802	1,836	1,872	1,915
3rd achievement quartile	1,661	1,816	1,841	1,887	1,901
2nd achievement quartile	1,662	1,811	1,837	1,876	1,866
Lowest achievement quartile	1,657	1,829	1,815	1,887	1,880
Total	6,626	7,258	7,329	7,522	7,562

Exhibit 29
Underprepared and Novice Teachers, by API Achievement Quartiles, 2004-05

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 1 or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they did not hold a “full credential” (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates. See table under Exhibit 3 for number of schools included in this analysis.

Exhibit 30
Underprepared and Novice Teachers, by School-Level Percentage of
10th-Grade Students Passing CAHSEE Math, 2004-05

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 1 or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they did not hold a “full credential” (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

Tenth-grade students were given one opportunity to take 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 mathematics portion, the variable “combined administration” was used to capture the number of students who took the exam on either the established test date or the make-up test date. To protect student privacy, the state gave all schools with 10 or fewer 10th-grade students taking the exam a value of “0” for the percent of students passing the mathematics portion of CAHSEE. Because this “0” did not mean that no students passed the mathematics portion of the exam, the 53 schools with 10 or fewer students are not included in the analysis.

Exhibit 31
Underprepared and Novice Teachers, by School-Level Percentage of
10th-Grade Students Passing CAHSEE English, 2004-05

Tenth-grade students were given one opportunity to take 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 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. 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 portion of the examination. Because this “0” did not mean that no students passed the English portion of CAHSEE, the 49 schools with 10 or fewer students are not included in the analysis.

Exhibit 32
Underprepared Teachers in Schools with the Highest and Lowest
Percentages of Minority Students, 1999-2000 to 2004-05

All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. The numbers of schools included in these analyses vary each year because of differing numbers of schools and differences in the completeness of the data sets (see table below).

Number of Schools, by School-Level Minority, for Minority Analyses

Percent of non-white student populations	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
0-30% minority	1,866	1,744	1,673	1,583	1,579	1,325
31-60% minority	1,592	1,981	1,969	1,992	1,990	2,079
61-90% minority	1,563	2,232	2,318	2,368	2,373	2,538
91-100% minority	1,689	1,566	1,673	1,780	1,776	2,081
Total	6,710	7,523	7,633	7,723	7,718	8,023

**Exhibit 33
Underprepared and Novice Teachers, by School-Level Percentage of Minority Students, 2004-05**

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 1 or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they did not hold a “full credential” (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates. See table under Exhibit 7 for number of schools included in this analysis.

**Exhibit 34
Underprepared and Novice Teachers, by School-Level Percentage of English Learners, 2004-05**

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 1 or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they did not hold a “full credential” (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

**Exhibit 35
Distribution of Interns, by School-level Percentage of Minority Students, 2004-05**

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”.

Exhibit 36
Underprepared Special Education Teachers,
by School-level Percentage of Minority Students, 2004-05

All nontraditional schools, such as adult, vocational, state special schools, or other alternative schools, are excluded from this analysis. Underprepared special education teachers are teachers who responded on the PAIF that they had a special education authorization and did not hold a “full credential” (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

Exhibit 37
Distribution of Underprepared Teachers with a Math Assignment,
by School-level Percentage of Minority Students, 2004-05

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 did not hold a “full credential” (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being “assigned” to math if they reported on the PAIF that they taught at least one mathematics course.

Exhibit 38
Distribution of Underprepared Teachers with a Science Assignment,
by School-level Percentage of Minority Students, 2004-05

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 did not hold a “full credential” (e.g., preliminary, professional clear, or life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being “assigned” to science if they reported on the PAIF that they taught at least one science course.

Appendix C

Data Collection Methods and Analyses

Case Studies

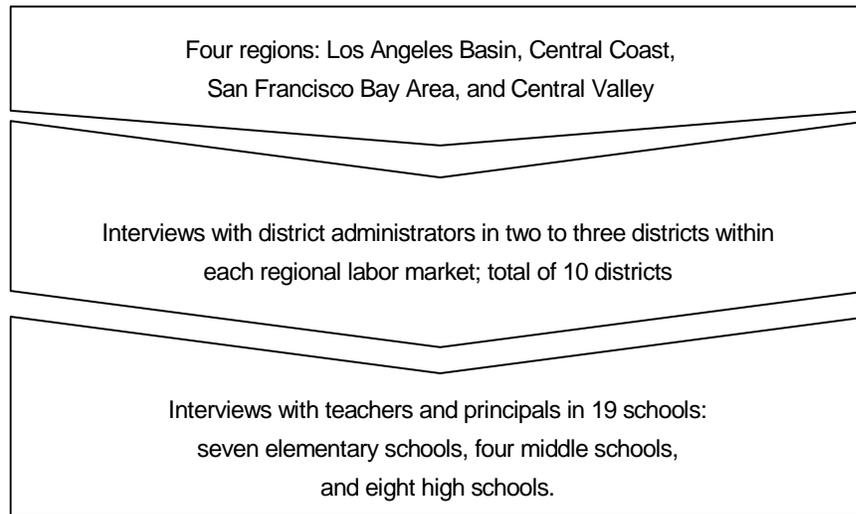
For several years, we have documented the persistent maldistribution of fully credentialed teachers across the state, establishing that schools serving large numbers of minority students, poor students, and English-language learners have disproportionate numbers of underprepared teachers. The purpose of the 2004-05 case study work was to deepen our understanding of the factors that perpetuate and reinforce the maldistribution and misassignment of teachers in California. We examined (1) policies and practices related to the hiring, distribution, and assignment of teachers at the local level, and (2) differences in the support provided to new and out-of-field teachers.

We conducted case studies in four teacher labor markets, visiting multiple districts in the same geographical region that draw on the same pool of teachers. In a total of 10 districts, we interviewed district officials, school administrators, and other school site leaders to determine how access to and use of available labor market data, formal policies (e.g., collective bargaining agreements, salary schedules), and practices (e.g., working conditions, instructional support) affect the hiring, distribution, and assignment of teachers at both the district and school levels. In addition, we interviewed teachers to learn how they chose their district and school and received their teaching assignments, and what kind of instructional supports are available to them. We also examined key contextual factors in each site, including local responses to the *Williams* settlement and the impact of NCLB on hiring and assignment practices. Lastly, we reviewed collective bargaining agreements from the 10 case study districts and 7 of the 10 largest districts in the state, and we interviewed union leaders in the case study districts to understand transfer and assignment policies.

Sample of Geographic Regions, Districts, and Schools

We selected a sample of 10 districts across four distinct regions in California—San Francisco Bay Area, Los Angeles Basin, Central Valley, and Central Coast. To capture distribution differences *between districts*, we included multiple districts within the same regional labor market (i.e., districts that draw on the same pool of teachers). To capture distribution differences *within districts*, we selected districts that are large and diverse enough to be instructive about within-district maldistribution. Within regional labor markets, we chose districts that varied in size (large city, midsize city, or small town) and degree of “desirability,” the latter determined by the percentage of underprepared teachers and the percentage of novice teachers. Within each district, we selected one to four schools. See Exhibit C-1 for an overview of the design.

Exhibit C-1 Overview of Case Study Design



This sampling strategy provided a sample of 10 districts, including two large urban districts, three midsize urban districts, one large suburban district, one midsize suburban district, and three small rural districts. Three of the districts were elementary (K-8), three were high school (9-12), and four were unified (K-12).

In each of the two large unified (K-12) school districts, we selected two elementary schools, one middle school, and one high school. In one small unified district, we selected an elementary school and a high school; in the other small unified school district, we selected a middle school and a high school. In one elementary (K-8) district, we selected an elementary school; in another elementary district, we selected an elementary school and a middle school. Finally, in two of the high school districts, we selected one high school; in a third high school district, we selected two high schools. We focused on secondary schools to better understand the assignment of out-of-field teachers.

This sampling strategy yielded a total of 19 schools in nine districts—seven elementary schools, four middle schools, and eight high schools. In a tenth district, we were unable to gain access to any school sites; that case study is limited to interviews with district personnel.

Data Collection Methods

The research team used semistructured interview guides for teachers and for administrators at the school and district levels linked to the study's overarching research questions. In each of the 10 districts, we interviewed the superintendent and/or assistant superintendent, as well as district administrators in charge of human resources, professional development, and new teacher support (see Exhibit C-2 for a list of interviewees). In total, we interviewed 23 district administrators.

**Exhibit C-2
Case Study Interviewees**

Level	Types of Interviewees
District	<ul style="list-style-type: none"> • Superintendent and/or deputy superintendent • Assistant superintendent/director of personnel or human resources • Director of professional development • Director of new teacher support • President of local teacher union
School	<ul style="list-style-type: none"> • Teachers (new hires, out-of-field teachers, special education or English-learner program coordinators, department chairs, and veterans) • Principal and/or assistant principal

At the school level, we interviewed principals and teachers. Within each school, we interviewed approximately 8 to 10 teachers, including new hires, out-of-field teachers, coordinators of English learner and special education programs, veterans with more than 5 years of teaching experience, and department chairs (see Exhibit C-2). At the elementary level, we selected new hires and out-of-field teachers in both primary (K-3) and intermediate (4-5), in English-learner programs and in special education programs. We also selected coordinators of English-learner programs and special education programs, and veteran teachers with more than 5 years of teaching experience. At the middle and high school levels, we selected new hires and out-of-field teachers in core subjects (for middle school, we selected teachers from the math and English/language arts departments; for high school, we selected teachers from the science and English/language arts departments), in English-learner programs, and in special education programs. We selected department chairs in core areas (math and English in middle school, science and English in high school), veterans with more than 5 years of experience, as well as coordinators of English-learner programs and special education programs. In many cases, teachers served multiple roles. In total, we interviewed 19 principals, 3 assistant principals, and 131 teachers. Exhibit C-3 displays the distribution of districts, schools, and teachers across the four regions.

Exhibit C-3
Sample of Districts, Schools, and Teachers

Region	District	School Level	Number of Teachers
Los Angeles	District 1 Large urban school district	Elementary 1	4
		Elementary 2	8
		Middle	8
		High	4
	District 2 Large suburban school district	Elementary 1	8
		Elementary 2	7
		Middle	8
		High	8
Central Coast	District 1 Small rural school district	Elementary	8
		High	8
	District 2 Small rural school district	Middle	6
		High	8
	District 3 Small rural elementary school district	Elementary	6
		Middle	2
Bay Area	District 1 Large urban high school district	High	6
	District 2 Midsize suburban high school district	High 1	6
		High 2	14
	District 3 Midsize urban elementary school district*	None	0
Central Valley	District 1 Midsize urban elementary school district	Elementary	4
	District 2 Midsize urban high school district	High	8

* We interviewed the head of Human Resources in this district, but were unable to obtain access to any school sites.

We also reviewed bargaining agreements and salary schedules in each district to further understand local policies related to compensation, transfers, and assignments. We attempted to interview the head of the local teachers' association in each district, but were not successful in scheduling interviews with the majority.

Case Study Analysis

Each case study team analyzed the data collected for its own site and synthesized the data in detailed case study debriefing reports. Over the course of our data collection and after the completion of the internal case study reports, the entire research team assembled for regular meetings to discuss emerging themes and findings within and across cases, and to develop cross-site themes about teacher recruitment, workplace conditions and support for new teachers, compensation, hiring and transfer policies and practices, teacher assignment, and out-of-field teachers.

Projecting Teacher Supply and Demand

Using the best available historical data beginning with 1992-93, we projected demand for the number of teachers needed and the number of credentialed teachers employed in the teaching workforce from 2005-06 through 2014-15. Our projections have relied on publicly available state-level data, as well as analyses conducted with specially requested data sets from state agencies, as we discuss below. Even with the best available data, we recognize that projection results can vary widely, depending on key assumptions, and that those assumptions have inherent weaknesses resulting from limitations concerning data usability in projecting supply and demand. Our assumptions and supporting analyses follow.

Our method of projecting supply and demand followed these general steps:

1. Estimate total demand for teachers each year.
2. Estimate total number of fully credentialed teachers in the workforce each year.
3. Estimate the total number of teachers with intern credentials in the workforce each year (not including the Individualized Intern Certificate).
4. Calculate the difference between total demand and estimated number of credentialed teachers in the workforce.

The “gap” is the difference between total demand and the number of credentialed teachers available to meet that demand. Currently, individuals without full credentials—interns, pre-interns, and individuals on emergency permits and waivers—fill this gap. In this year’s report, we show how much of this gap can be filled by intern teachers who are considered “highly qualified” under NCLB, but who are not fully credentialed.

Total Demand Calculations

Total demand for credentialed teachers is a function of projected student enrollment, pupil-to-teacher ratio, and teacher attrition and retirement rates. Exhibit C-4 details these assumptions.

Exhibit C-4
Demand Factors and Assumptions

Demand Factor	Assumptions
Projected student enrollment	Actual 2004-05 student enrollment (CDE, 2005n), plus annual growth rate of 1.0% in 2005-06. Growth rate fluctuates from a low of 0.01% to a high of 0.05% between 2006-07 and 20014-15 (CDOF, 2004). ^a
Pupil-to-teacher ratio	Actual 2004-05 statewide pupil-to-teacher ratio of 20.6, calculated by dividing CDE-reported total enrollment by CDE-reported total teachers for 2004-05. This number differed slightly from the CDE reported pupil-teacher ratio of 21.2 for 2004-05. The ratio of 21.2 was applied to projected years 2005-06 through 2014-15.
Attrition rate	Estimated at 4.6% of the total teacher workforce annually, held constant through 2014-15. This is a 7-year average derived from cohort analysis of the PAIF collected annually by CDE (CDE, 1999d). ^b (See discussion of the attrition rate below.)
Retirement rate	Estimated retirement rates using CalSTRS membership data from the CalSTRS fiscal 2003-04 annual report (CalSTRS, 2005). A retirement rate <i>index</i> was created on the basis of total CalSTRS membership data. The index was applied to estimated 10-year historical average K-12 teacher retirement rate of 1.8%, derived from cohort analysis of the PAIF collected annually by CDE (see discussion of historical retirement rate and retirement bulge below).

^a Because CDE includes students under the California Youth Authority, whereas CDOF does not, the rate of growth used in the CDOF projections from 2004-05 through 2013-14 is applied to the student enrollment CDE reported in 2003-04.

^b PAIF data were not collected in 1991-92 and 1993-94. Years 1996-97 through 2000-01 were retrieved from <http://www.cde.ca.gov/demographics/files/paif.htm>. Data files and file structures for all other years were specially requested from CDE's Educational Demographics Unit.

Attrition rate

The PAIF, an annual survey of all teachers employed in the state, captures years of teaching experience, years of employment in the same district, full- or part-time status, teaching and school assignment, and, since 1998, full-credential status (an individual with full-credential status holds a preliminary or professional clear credential).¹ The PAIF does not include consistent individual identifiers and therefore does not track teachers over time.

Following the general methods used in Fetler (1997), we have constructed hypothetical cohorts using the database for 1990-91, 1992-93, 1994-95 through 2000-01, and 2003-04 through 2004-05.² That is, those reporting 1 year of teaching experience in 1994-95 were assumed to be those reporting 2 years of teaching experience in 1995-96, and so on.³ For each

¹ For a description of variables see Professional Assignment Information Form. File structure available at <http://www.cde.ca.gov/ds/sd/cb/filepaif.asp>

² For 2001-02 and 2002-03, PAIF did not contain the necessary variables for this analysis.

³ Fetler (1997) defined a cohort as those reporting the same years of experience as years in the same district. Those reporting more years of experience than years of employment with their current district were eliminated from the cohort. Thus, the size of the cohort was reduced by the number of individuals changing districts, as well as by those leaving the profession. In other words, Fetler overstated attrition by capturing both attrition from the district and attrition from the profession.

cohort, we have calculated the difference between the numbers of teachers from one year to the next, from 1990-91 through 2004-05. Those reporting more than 50 years of experience have been eliminated from the analysis because they represent a very small number and because errors in the data could not be ruled out. The difference for cohorts with fewer than 25 years of experience has been assumed to be attrition from the profession.⁴ (Those leaving after 25 years of experience or more have been considered to have retired—see the Retirement section below.)

The primary problem with this approach is that it has a systematic bias for underestimating attrition. Specifically, teachers who leave the profession for a limited time but reenter are included in the attrition numbers during the year they leave. On their reentry, they are counted among those remaining in the profession in another cohort (assuming that they report the years of experience they had attained before leaving). This calculation technique thus overestimates attrition in the year they left and reduces the number of teachers who appear to leave the profession in the year they return. Although such differences may cancel out when averaged across multiple cohorts, differences will not cancel out for teachers from other states with more than 1 year of experience entering the California teaching force. With this method, counting out-of-state teachers—averaging more than 4,000 annually from 1995-96 through 2003-04—systematically reduces the number of teachers who are assumed to have left the cohort.

The number of teachers apparently dropping out of each cohort, summed across cohorts reporting fewer than 25 years of experience and taken as a percentage of the teaching force, has yielded a statewide estimate of attrition. From 1994-95 to 2003-04, the estimate for attrition over those 10 years ranged from 2.8% to 6.8% and averaged 4.6% annually. We have used the annual average to project attrition.

Historical retirement rate

Using the same PAIF analysis as that for attrition, we have assumed that changes in cohorts of 25 years' or more experience represent retirement. From 1991-92 to 2004-05, the estimate for retirement ranged from 0.9% to 2.2% and averaged 1.8% annually.⁵

Retirement rate

Rather than assuming a flat retirement rate, we have factored a retirement bulge into the demand projections to account for the impending retirement of baby boomers. Using data from the California State Teachers' Retirement System (CalSTRS) (CalSTRS, 2005), the number of active members was forecast by applying 14-year (1991-2004) historical averages for the annual percentage of members turning inactive and the annual percentage of members joining CalSTRS. The annual number of retiring members from 2004-05 to 2014-15 has been projected by using

⁴ The number of teachers with more than 1 year of experience consistently decreases from year to year.

⁵ Data for retirement are available for more years than are data for attrition because the attrition estimates also incorporate data on out-of-state credentials, which we have for fewer years.

actual age-based data. Members aged 50 to 60 in 2004 were assumed to retire at the CalSTRS members' average retirement rate of 61 from 2004-05 through 2014-15. The number of annual retired members was calculated as a percentage of total estimated members for that year. The corresponding annual retirement rates were indexed to the 14-year (1991-2004) historical average CalSTRS members' retirement rate. The resulting index begins at 162 in 2005, peaks at 267 in 2008-09 and declines to 199 in 2014-15.⁶

Supply Calculations

Two groups comprise the supply of teachers taking jobs in California—fully credentialed teachers and interns (see Exhibit C-5). Fully credentialed teachers include veteran credentialed teachers, newly credentialed teachers, reentrants, and out-of-state teachers. The “supply” of fully credentialed teachers refers to those who hold preliminary or professional clear credentials as specified by CTC requirements and who are willing to take jobs for the salary, assignment, location, and working conditions offered. In our initial two reports (Shields, et. al. 1999, 2001), interns were not included in the supply of teachers because they had not met the minimum requirements for a preliminary or professional clear credential. Under NCLB, interns have been defined as meeting the “highly qualified” definition. As a result, a separate line indicating the supply of interns was added to the supply of fully credentialed teachers beginning with the 2004 report to show the supply of NCLB-compliant teachers. Our supply count excludes teachers who do not meet the NCLB’s “highly qualified” definition, including those who are teaching with individualized intern certificates, emergency permits, pre-intern certificates, or waivers. The larger pool of teachers qualified to teach but electing not to do so cannot be estimated with the available data.

⁶These index figures differ from those estimated in Esch et al. (2004) because data were updated.

**Exhibit C-5
Supply Components and Assumptions**

Supply Component	Assumptions
Veteran credentialed teachers	Estimated credentialed teachers from previous year less the attrition and retirement rates.
New credentials issued	First-time and new-type multiple-subject, single-subject, education specialist teaching credentials. (Teachers with new-type credentials include those who previously held emergency permits.) The latest available data are from CTC for 2003-04. Beginning in 2004-05, projected credentials recommended are based on a four year (2000-01 to 2003-04) average. (CTC, 1998a, 1999a, 1999b 2000a, 2001a, 2002a, 2002b1, 2003b, 2003c1, 2004d, 2004e1, 2005f & 2005g). ^a
Newly credentialed teachers taking jobs (participation rate)	Participation rates of each cohort of newly credentialed teachers are 81% within 1 year, 2.1% between 1 and 2 years, and 0.5% at 2 or more years after receiving the credential, derived from analysis of CTC and CalSTRS data (see Participation Rate below).
Reentrants	Numbers of reentrants for 1993-94 to 1999-2000, estimated by subtracting the number of new teachers from the number of new hires. ^b The 7-year (1993-94 to 1999-2000) average of the estimated number of reentrants has been taken as 0.6% of the workforce in the prior year, held constant from 2000-01 to 2014-15.
Out-of-state new hires	The 8-year (1996-97 to 2003-04) average number of out-of-state new credentials of 4,383 has been held constant from 2004-05 to 2014-15 and subject to the assumed participation rates.
Interns	The 13,766 interns (not including individualized interns) in 2003-04 has been held constant from 2005-06 to 2014-15. Individualized interns in 2002-03 and 2003-04 are included in the total number of interns for those years because at the time these individuals were counted as interns. Beginning in 2004-05, individualized interns were not included in the projected number of interns. We have assumed 100% participation in the workforce.

^a Data for years 1991-92 to 1996-97 are from CTC (1998a); data for 1997-98 are from CTC (1999a & 1999b); data for 1998-99 are from CTC (2000); data for 1999-2000 are from CTC (2001a); data for 2000-01 are from CTC (2002a & 2002b1); data for 2001-02 are from CTC (2003b & 2003c1); data for 2002-03 are from CTC (2004d & 2004e1); data for 2003-04 are from CTC (2005f & 2005g).

^b New hires include all recipients of first-time/new type preliminary credentials, intern credentials, and emergency permits who took jobs as indicated by contributions to CalSTRS.

Participation rate

By special request in 2001, CTC and CalSTRS provided data to SRI on credentialing and contribution to CalSTRS for individuals who received first-time/new-type preliminary, emergency permit, or intern credentials for cohorts from 1991-92 through 1998-99. SRI linked the data to analyze the routes into teaching. To calculate the participation rate—the percentage of new credential holders who took full-time teaching jobs—contribution to CalSTRS was used as a

proxy. The participation rates derived from this 2001 analysis (described below) were applied to this year's projections calculations.

The data set was organized by cohorts of teachers defined by when they first received credentials from CTC; however, analysis of the CalSTRS data showed that many had been contributing to the teacher retirement system previously. To distinguish those who were truly new to teaching from those who probably held previous teaching jobs, we divided the cohort into four analytic categories, based on whether individuals had previously held another full credential, emergency permit, intern credential, or no credential allowing them to be teachers of record. This step was crucial to the analysis of workforce participation because we would not expect individuals who were previously teachers of record to take jobs at the same rate as those with no previous experience. Had we analyzed all credential recipients of a cohort together, we would have compared individuals who had just begun teaching with those who received other credentials in past years and had probably been teachers of record for several years already.

Contribution to CalSTRS is an inexact proxy for workforce participation and results in an overestimate of the number of credential holders who are full-time classroom teachers. We know that (1) some portion of those making CalSTRS contributions are working part-time or as substitute teachers, (2) some portion are working in nonclassroom assignments, and (3) some portion may even be working as community college instructors. The individuals in these three categories are involved in "creditable service" and thus qualify to make CalSTRS contributions, but they are not full-time K-12 classroom teachers. Therefore, the resulting workforce participation rate is inflated in the sense that we are counting individuals with whom we are not concerned for the purposes of this analysis. Although we were able to estimate the numbers who begin as substitute teachers, we could not isolate the number who work as part-time teachers or in nonclassroom assignments.

Because there were clear trends in changing participation patterns throughout the 1990s, we used participation rates for the three most recent cohorts included in the analysis (1996-97 through 1998-99, post-CSR) in the projections. The CTC/CalSTRS analysis on workforce participation reveals that, historically, a significant percentage of newly credentialed teachers take their first teaching jobs up to 3 years after receiving their credential. For the cohorts receiving their credentials from 1996-97 through 1998-99, 86.4% took jobs before or within 1 year of receiving their credentials, another 2.2% took jobs during the second year, and 0.5% took jobs in the third year or later. Of those who took jobs, 55% entered as substitutes and 45% entered in another capacity, although not necessarily a regular classroom teacher. Of those who began as substitutes, the vast majority (88%) changed status from substitutes to "nonsubstitutes" within 1 year. The participation rates were applied to those who did not begin as substitutes and the percentage of substitutes who converted to nonsubstitute status within 1 year. The effective participation rates therefore were 81% within 1 year, 2.1% between 1 and 2 years, and 0.5% at 2 or more years after receiving the credential.

Reentrants

No direct measure of reentrants is available from the data currently collected in the state. To estimate this figure, we have calculated the annual number of teachers retained from the prior year, based on the PAIF analysis described for attrition and retirement. The difference between the number of teachers in the workforce and the number of teachers retained from the prior year represents the total number of new hires. We have taken the number of individuals new to teaching, which includes all new preliminary and intern credential holders, as well as new emergency permit holders, who take jobs. The difference between the number of new hires and new individuals taking teaching jobs has been assumed to be the number of reentrants. This number (0.6% of the workforce in the prior year) has been held constant in the projections.

Calculating the Gap Between Demand and Supply of Fully Credentialed Teachers Taking Jobs

The supply of fully credentialed teachers in the workforce in a given year is equal to the sum of:

- Veteran credentialed teachers continuing to teach (i.e., net of attrition and retirement).
- The number of newly credentialed teachers (including those from out of state) taking jobs.
- The number of reentrants.

The difference between the total number of teachers required in the state and the supply of fully credentialed teachers taking jobs represents the number of teaching positions unfilled by fully credentialed teachers. Some of these teaching positions are currently filled by interns, who meet the definition of “highly qualified” under NCLB, but have yet to complete the requirements for a full credential. We have accounted for the gap filled by interns in the projections. The remaining unfilled positions would have to be staffed with underprepared teachers, such as those with emergency permits and waivers, to maintain the current pupil-to-teacher ratio. As we indicated above, the attrition rates are likely to be understated, and the participation rates are likely to be overstated.

Appendix D

Teacher Assignment Policies

This appendix describes the various teacher assignment, authorization, and monitoring practices in California.

State Teacher Assignment Regulations and Monitoring

State education code permits the assignment of a single-subject teacher, with consent, to teach any subject in an authorized field at any grade level, PreK-12 and adult classes. Likewise, a multiple-subject teacher may be assigned, with consent, to teach in any self-contained classroom at any grade level, PreK-12 and adult classes (CTC, 2001e).

Teachers also can be assigned to teach classes if they meet minimum unit requirements, demonstrate subject-matter competence, or demonstrate possession of special skills or preparation outside of their credential authorization. Exhibit D-1 lists the most commonly used forms of flexible assignment allowed by the state and employed by schools and districts.

Exhibit D-1 Education Code and Assignment Flexibility

The following provisions from the California Education Code were adopted to provide local districts with greater assignment flexibility:

§44256(b) (6/12, grades 8 and below) allows the elementary credentialed teacher to teach subjects in departmentalized classes grades 8 and below if the teacher has completed twelve semester units, or six upper division or graduate semester units in the subject area to be taught.

§44258.2 (6/12, grades 5-8) allows the secondary credentialed teacher to teach classes in grades 5 through 8, provided that the teacher has a minimum of twelve semester units, or six upper division or graduate semester units in the subject to be taught.

§44258.3 (Craven) allows local school districts to assign credentialed teachers to teach departmentalized classes in grades K-12, irrespective of the designations on their teaching credentials, as long as the teacher's subject-matter competence is verified according to policy and procedures approved by the governing board.

§44258.7(c) & (d) (Committee on Assignments) allows a full-time teacher with special skills and preparation outside his or her credential authorization to be assigned to teach in an "elective" area (defined as other than English, mathematics, science, or social science) of his or her special skills, provided the assignment is approved by the local Committee on Assignments prior to the beginning of the assignment.^a

§44263 (9/18) allows the credential holder to teach in a departmentalized class at any grade level if the teacher has completed eighteen semester units of course work, or nine semester units of upper division or graduate course work in the subject to be taught.

a The Committee, established by the Commission, consists of five (5) members appointed by the Commission: two practicing school teachers, one practicing school service representative other than a school administrator, one practicing school administrator or one practicing certificated human resources administrator, and one school board member. All members must have experience in the area of legal assignment authorizations. The committee for local boards is similar in composition to the State Committee on Assignments.

Source: CTC (2004h).

Assignments that do not fall along those guidelines would be considered a violation of state Education Code. It is illegal for a credentialed teacher to accept any assignment for which the individual is not authorized. Likewise, it is illegal for an administrator to assign a teacher to classes for which that teacher does not hold the proper credential. Indeed, administrators must demonstrate knowledge of proper assignment practices in order to earn an administrative credential. (For the state, having proper authorization appears to be more of a technical paperwork concern; an emergency permit or waiver would constitute adequate authorization) (CTC, 2001e).

State Definition of Misassignment

According to the Education Code, a misassignment is “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” (CTC, 2005f).

Any credentialed teacher required to accept a misassignment by an administrative superior can, after exhausting local options, contact the county superintendent in writing about the illegal assignment. The education code requires the county superintendent to advise the teacher of the legality of the assignment within 15 working days, and no punitive actions may be taken against the teacher for filing such a claim. If the county superintendent determines that a misassignment has occurred, any performance evaluations in that subject would be nullified and the administrator would have 30 days to correct the assignment. The county superintendent must notify the Commission on Teacher Credentialing (CTC) within 30 days if the misassignment has not been corrected or if the administrator has not explained the extraordinary circumstances that require the misassignment to continue. It is not clear from the code what would constitute acceptable “extraordinary circumstances” (CTC, 2001e).

Lastly, state code requires the county superintendent of schools to notify any superintendent of a school district in which 5% or more of all certificated teachers in the secondary schools are found to be misassigned about the misassignments and advise him or her to correct the misassignments within 120 calendar days. It is illegal for even one teacher to be misassigned, however. If the misassignments are not corrected within the allotted time or if the district superintendent has not satisfactorily explained the situation in writing, the county superintendent must notify the CTC (CTC, 2001e).

Assignment Monitoring

Since 1986, the CTC has sought to bring increased attention to the issue by offering assignment workshops, producing the Administrator’s Assignment Manual, and sponsoring more flexible assignment legislation. In 1986, the legislature passed SB 435 (Watson) requiring county superintendents to monitor one-third of their school districts each year and, in 1990, the CTC required county superintendents to submit reports on teaching assignments made under the most widely used Education Code options (see Exhibit D-1 above) and misassignments (CTC, 2004h).

The legislation required county superintendents to collect and report the following information to the CTC:

- The number of teachers assigned and types of assignments made by local district governing boards under the authority of Sections 44256, 44258.2 and 44263 of the Education Code.

- Information on actions taken by local Committees on Assignment (EC 44258.7), including the number of assignments authorized and subject areas in which committee authorized teachers are assigned.
- Information on each school district reviewed regarding misassignments of certificated personnel, including efforts to eliminate these misassignments.
- After consultation with representatives of county superintendents of schools, other information as the CTC may determine is needed. This includes information on assignments under Education Code 44258.3 and the number of individuals assigned to serve Limited English Proficient students (CTC, 2004h).

In 1996, the CTC changed the monitoring and reporting requirement to one-quarter of the districts in each county each year. Schools with misassignment problems or deemed likely to have them were to be monitored on an annual basis.

For assignment reporting purposes, in the wake of the *Williams* settlement, county superintendents will continue to report data for all schools in one-quarter of the districts in each county. Now, however, they will also report the status of API 1–3 schools separately from other schools in the district. These reports will be sent to both the CTC and the CDE, whereas previously they went only to the former.

For all K-12 classes (core academic, elective, and special education) in API 1–3 schools that have 20% or more English learners (ELs), this reporting must be done annually regardless if the district is part of the larger monitoring and reporting effort. The data collection is limited to reporting on appropriate EL authorization; in order to be in compliance, the credential authorization must match the type of services (ELD, SDAIE, or bilingual instruction; described in more detail below) being provided by the teacher. Four areas that must be monitored and reported:

- Number of classes at a school site that have 20% or more English learners.
- Number of classes with 20% or more English learners and the teacher holds an appropriate English learner authorization.
- Number of classes with 20% or more English learners and the teacher *does not* hold an appropriate English learner authorization.
- English learner enrollment at each school site (CDE, 2005f)

Any time a misassignment is found, it must be reported to the district superintendent. Again, one EL student with an unauthorized teacher is sufficient to merit a misassignment identification. The misassignment must be corrected within 30 days of notification. If it is not, the misassignment must be reported to the CTC, which will contact the superintendent and if necessary follow-up with sanctions (CTC, 2005f).

EL Teacher Preparation, Instruction, and Authorization

Standards of Quality and Effectiveness for Professional Teacher Preparation Programs

To assist universities with the transition to AB 1059, the CTC issued Draft Standards of Quality and Effectiveness for Professional Teacher Preparation Programs. Included in this document were 23 program standards; one (number 13) addressed the authorization to teach English learners. Programs were expected to provide teachers with a diverse set of experiences and skills, including student language acquisition, linguistic development, practicum with ELs, and interpretation of EL assessments.

Program Standard 13: Preparation to Teach English Learners

In the professional teacher preparation program, all candidates have multiple systematic opportunities to acquire the knowledge, skills, and abilities to deliver comprehensive instruction to English learners. Candidates learn about state and federal legal requirements for the placement and instruction of English learners. Candidates demonstrate knowledge and application of pedagogical theories, principles, and practices for English Language Development leading to comprehensive literacy in English, and for development of academic language, comprehension, and knowledge in the subjects of the core curriculum. Candidates learn how to implement an instructional program that facilitates English language acquisition and development, including receptive and productive language skills, and that logically progresses to the grade-level reading/language arts program for English speakers. Candidates acquire and demonstrate the ability to utilize assessment information to diagnose students' language abilities, and to develop lessons that promote students' access to and achievement in the state-adopted academic content standards. Candidates learn how cognitive, pedagogical and individual factors affect student's language acquisition (CTC, 2003e).

Program Elements for Standard 13: Preparation to Teach English Learners

An accreditation team determines whether the preliminary teacher preparation program meets this standard based on evidence provided by the program sponsor. The team must determine that the quality of the program has been clearly and effectively substantiated in relation to each of the following elements:

- 13(a) The program provides opportunities for candidates to understand the philosophy, design, goals, and characteristics of school-based organizational structures designed to meet the needs of English learners, including programs for English language development and their relationship to the state-adopted reading/language arts student content standards and framework.

- 13(b) The program’s coursework and field experiences include multiple systematic opportunities for candidates to learn, understand, and effectively use materials, methods and strategies for English language development that are responsive to students’ assessed levels of English proficiency, and that lead to the rapid acquisition of listening, speaking, reading, and writing skills in English comparable to those of their grade-level peers.
- 13(c) Through planned prerequisite and/or professional preparation, candidates learn relevant state and federal laws pertaining to the education of English learners, and how they impact student placements and instructional programs.
- 13(d) The program design provides each candidate opportunities to acquire knowledge of linguistic development, first- and second-language acquisition and how first-language literacy connects to second-language development.
- 13(e) The program’s coursework and field experiences include multiple systematic opportunities for candidates to understand and use instructional practices that promote English language development, including management of first- and second-languages, classroom organization, and participation by specialists and paraprofessionals.
- 13(f) The program’s coursework and field experiences include multiple systematic opportunities for candidates to acquire, understand, and effectively use systematic instructional strategies designed to make grade-appropriate or advanced curriculum content comprehensible to English learners.
- 13(g) Through coursework and field experiences candidates learn and understand how to interpret assessments of English learners. Candidates understand the purposes, content, and uses of California’s English Language Development Standards, and English Language Development Test. They learn how to effectively use appropriate measures for initial progress monitoring and summative assessment of English learners for language development and for content knowledge in the core curriculum.
- 13(h) The program is designed to provide opportunities for candidates to learn and understand the importance of students’ family and cultural backgrounds and experiences (CTC, 2003e).

Types of EL Classrooms in California

There are three types of EL classrooms in the state: English Language Development (ELD), Specially Designed Academic Instruction in English (SDAIE), and bilingual instruction. Instruction for ELD means instruction designed specifically for EL students to develop their listening, speaking, reading, and writing skills in English. SDAIE means instruction in a subject area, delivered in English, and specifically designed to provide EL students with access to the curriculum. Bilingual instruction means academic instruction in the student’s primary language (CTC, 2005g).

Types of EL Authorizations

There are several types of authorizations for teaching ELs. Appropriate English learner authorizations include AB 1059 English Learner Content, Crosscultural, Language and Academic Development (CLAD), Bilingual Crosscultural, Language and Academic Development (BCLAD), SB 1969 Certificate, Certificate of Completion of Staff Development (through SB 395/AB 2913 training), or other permits authorized by statute (e.g., emergency permits) to serve English learners. Also, older and no longer initially issued credentials such as the Language Development Specialist (LDS) Certificate and the Bilingual Certificate of Competence (BCC) may also be considered proper authorizations. There is one exception to the statute: “teachers in training” through the Certificate of Completion program who are actively participating in professional development. This exception does not apply to those teachers in the process of completing CLAD or BCLAD coursework or exams. Teachers in those situations will have to be reported as not holding the proper authorization to teach ELs (CTC, 2005f).

CLAD and BCLAD

The BCLAD authorization allows a teacher to teach in all three types of EL classrooms (whereas the CLAD only authorizes ELD and SDAIE instruction) and the requirements to obtain it (passage of more tests) are greater than those for the CLAD and can be obtained only via exam. This credential is less widely held than the CLAD as well (CTC, 2005g).

AB 1059

In 2002, AB 1059 required California colleges and universities and district intern programs to implement a new English learner standard for both the Ryan and the new SB 2042 credentialing programs. By embedding an EL standard into the basic credential requirements, AB 1059 and SB 2042 programs replaced the existing CLAD emphasis programs. CLAD emphasis programs were not allowed to admit any new candidates after July 2002, although candidates already enrolled in a CLAD emphasis program, or any other program that offered a preliminary credential, could complete the program in which they were originally admitted. Given the ever-growing student diversity in California, requiring all teachers to have training in how to teach ELs makes good sense; however, it is not clear what preparatory rigor was lost with the replacement of the CLAD emphasis programs with the AB 1059 approach (CTC, 2001g).

SB 395

SB 395 provides for two distinct 45-hour segments of staff development. The content is to consist of: (1) an initial block of 45 hours covering a combination of Specially Designed Academic Instruction in English (SDAIE) methods and English Language Development (ELD) instruction, and (2) a second block of 45 hours of training of either ELD instruction or a combination of SDAIE methods and ELD instruction. Whether a teacher will complete one

segment (45 hours) or two segments (90 hours) depends on the authorization being sought, authorization of his or her basic credential (Multiple Subjects or Single Subject Credential), years of teaching experience, and nature of professional experience. The table below outlines the eligibility requirements for participating in a SB 395 Certificate of Completion program (CTC, 2001h).

**Exhibit D-2
SB 395 Training and Authorizations**

Credential Type	Eligibility: Status and Experience	Training Required for SDAIE Authorization & ELD in a Departmentalized Setting	Training Required for SDAIE & ELD in a Self-Contained Classroom
Multiple Subjects	Permanent status as of 1/1/99 Nine or more years of teaching experience and certified professional experience with English learners	45 hours of training covering a combination of SDAIE methods and ELD instruction	The training referred to in the previous column also will confer the ELD Self-Contained Classroom authorization for this teacher
Single Subjects	Permanent status as of 1/1/99 No specific experience requirement	45 hours of training covering a combination of SDAIE methods and ELD instruction	N/A
Multiple Subjects	Permanent status as of 1/1/99 Less than nine years of teaching experience or no certified professional experience with English learners	Initial segment of 45 hours of training in a combination of SDAIE methods and ELD instruction	Prior completion of the same 45 hours of training referred to in the previous column and 45 hours of additional training in a combination of SDAIE methods and ELD instruction, or ELD instruction only

Sources: CTC (2001h).

CTEL

There is also an exam option for veteran teachers to become authorized to teach ELs. AB 1059 required the CTC to develop and administer a test that would certify teachers to teach English-language learners. As a result of this legislation, the commission has created the California Teachers of English Learners (CTEL) Examination to replace the existing Crosscultural, Language, and Academic Development (CLAD) Examination for experienced and out-of-state teachers without EL authorization. The test will be given twice a year, with the first administration in December 2005 (CTC, 2005h).

Appropriate Authorizations for Classrooms

Not all authorizations allow teachers to teach in all instructional situations, however. See table below for identification of which certification authorizes teachers to conduct ELD, SDAIE, or bilingual instruction.

**Exhibit D-3
Appropriate English Learner Authorizations for Certificated Assignment Monitoring
and Data Collection per Education Code Section 44258.9**

English Language Development (ELD)	Specially Designed Instruction in Academic English (SDAIE)	Instruction in Primary Language (Bilingual)
Bilingual Specialist Credential	Bilingual Specialist Credential	Bilingual Specialist Credential
Bilingual Certificate of Competence (BCC)	Bilingual Certificate of Competence (BCC)	Bilingual Certificate of Competence (BCC)
Bilingual Crosscultural Language and Academic Development (BCLAD) Certificate or BCLAD Emphasis	Bilingual Crosscultural Language and Academic Development (BCLAD) Certificate or BCLAD Emphasis	Bilingual Crosscultural Language and Academic Development (BCLAD) Certificate or BCLAD Emphasis
		Sojourn Teaching Credential
Language Development Specialist (LDS) Certificate	Language Development Specialist (LDS) Certificate	
Crosscultural Language and Academic Development (CLAD) Certificate or CLAD Emphasis	Crosscultural Language and Academic Development (CLAD) Certificate or CLAD Emphasis	
Multiple or Single Subject with AB 1059 English Learner Content	Multiple or Single Subject with AB 1059 English Learner Content	
Multiple or Single Subject SB 2042	Multiple or Single Subject SB 2042	
General Teaching Credential		
Supplementary Authorization in English as a Second Language		
Certificate of Completion of Staff Development (through SB 395/AB 2913)	Certificate of Completion of Staff Development (through SB 395/AB 2913)	
SB 1969 Certificate of Completion	SB 1969 Certificate of Completion	
In training for Certificate of Completion of Staff Development (through SB 395/AB 2913)	In training for Certificate of Completion of Staff Development (through SB 395/AB 2913)	
Plan to Remedy the Shortage (PTR)	Plan to Remedy the Shortage (PTR)	Plan to Remedy the Shortage (PTR)

Source: CTC (2005f).

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