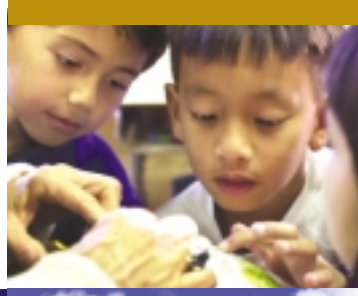
Teaching and California's Future



The Status of the Teaching Profession 2001

The Center for the Future of Teaching and Learning

The California State University Institute for Education Reform
Policy Analysis for California Education
The University of California, Office of the President
WestEd

Research conducted by SRI International

The Status of the Teaching Profession 2001

An Update to the Teaching and California's Future Task Force

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. Margaret Gaston and Harvey Hunt, co-directors of The Center for the Future of Teaching and Learning, organized and directed the work.

Cosponsors include: The California State University Institute for Education Reform; Policy Analysis for California Education; the University of California, Office of the President; and WestEd.

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Research for Teaching and California's Future was conducted by SRI International, which had primary responsibility for writing this report. SRI International is an independent, nonprofit corporation that performs a broad spectrum of problem-oriented research and consulting to government and industry. The SRI research team included the following people: Patrick M. Shields, director; Katherine Baisden; Camille Esch; Daniel Humphrey; Nancy Kamprath; Andrea Lash; Lori Riehl; Juliet Tiffany-Morales; Lisa Uperesa; Eileen Wojdula; and Viki Young. Inverness Research Associates conducted fieldwork and assisted in the analysis of case study data. Inverness team members include Mark St. John, Barbara Heenan, Jo Fyfe, Katherine Ramage, and Laura Stokes.

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1. Introduction

Over the past 5 years, California's educational system has undergone a sea change. In response to lagging achievement scores, policy-makers have adopted a set of ambitious standards for what California school children should know and be able to do across the content areas. These standards have been backed up by a system that seeks to hold schools, teachers, and students accountable for results. Each school in the state has been given achievement targets to ensure that students are on the path to achieving the state's standards. Low-performing schools are eligible for assistance, but they also are subject to sanctions if they do not improve. Teachers are eligible for bonuses when their schools meet achievement targets. Students need to meet reasonable standards to pass from one grade to the next, and all students will have to pass the new exit exam to graduate from high school.

This movement toward standards and accountability has taken place within the context of a severe shortage of fully credentialed teachers willing to take jobs in K-12 classrooms. As the stakes for students have risen, the number of classrooms headed by individuals who have not yet completed the minimum credential requirements has increased, from 34,000 in 1997-98 to 42,000 in 2000-01. Of particular concern has been the maldistribution of these underprepared teachers. Students in low-achieving schools are five times more likely than their peers in high-achieving schools to have a teacher who has not yet earned a credential.

In many parts of the state, severe shortages of fully prepared teachers have created crises in the systems that prepare and support teachers. Increasingly, teacher preparation programs are serving students who are already teaching full-time. Nearly half the new teachers are not targeted by the state's highly touted induction program because they do not have a preliminary credential. In hard-to-staff schools, the lines between preparation, induction, and professional development have been blurred as teachers struggle to get a credential and learn their craft while working full-time.

In response, policy-makers increasingly have focused their efforts on strengthening the skills and knowledge of the teacher workforce in the state. On the simple premise that the quality of the teachers is a critical factor in students' learning, policy-makers have taken a set of forceful steps to bolster the teacher workforce. These efforts have followed two parallel tracks: increasing the flow of fully prepared teachers into the system and providing increased support to teachers to retain them in the profession and better prepare them to meet students' needs.

Efforts to increase and strengthen the flow of teachers into the profession include:

- Commitments for all sectors of the higher education community to increase the production of teacher candidates.
- Rapid expansion of programs to support individuals already teaching without a full credential, especially the intern and pre-intern programs.
- New investments of $300 million in efforts to recruit teachers into the profession, especially in low-achieving schools.

Efforts to strengthen the skills and knowledge of the current teacher workforce include:

- Continued expansion of the formal induction program for first- and second-year teachers.
- The design of a two-tier credentialing system that requires completion of a beginning teacher induction program to earn a professional (Level II) credential.
- The development of the California Professional Development Institutes and the expansion of the California Subject Matter Projects to scale up professional development opportunities to large numbers of teachers.
- Recent legislation, AB 466, to expand on these efforts by providing districts incentives to invest more heavily in professional development for their teachers.

Taken together, these many initiatives are meant to address the ongoing challenge of ensuring that all students in California are taught by a fully credentialed and effective teacher.

Teaching and California's Future

During this period of increased policy activity, the *Teaching and California's Future* initiative has endeavored to highlight the strengths and weaknesses of the system of teacher development in the state and to provide policy-makers with the data they seek to inform their decisions. Led by the Center for the Future of Teaching and Learning and cosponsors—California State University Institute for Educational Reform, Policy Analysis for California Education (PACE), University of California Office of the President, and WestEd—the initiative brought together a group of policy-makers and practitioners to seek common ground in strengthening the skills and knowledge of the state's teacher workforce. *Teaching and California's Future* involves a twofold strategy: (1) employ SRI International to undertake an ongoing comprehensive study of the conditions of teacher development in the state to inform the work of the policy community and (2) convening a task force of key policy-makers, practitioners, and representatives of institutions of higher education and professional organizations to use this information to improve the public education system and inform members of the policy community.

The results of the first phase of that work were released to the Teaching and California's Future Task Force and then to the general public in December 1999. The report, *The Status of the Teaching Profession: Research Findings and Policy Recommendations,*[1] documented the maldistribution of underprepared teachers across the state and pinpointed the strengths and shortcomings in the systems designed to support teachers. In response to these findings, the Task Force leadership developed a set of key goals:

1. Ensure that every child has a fully qualified, effective teacher.
2. Eliminate the hiring of underprepared teachers.

3. Improve the ability of the teaching profession to attract and keep fully qualified teachers.

4. Strengthen accountability for all teacher education programs.

5. Reduce unnecessary barriers to teaching.

6. Encourage and support teachers to reach high levels of subject matter expertise and instructional skill.

These goals, the strength of the data on which they were based, and the goodwill and efforts of the Task Force membership combined to help shape the policy debate during the 1999-2000 legislative year.

On the basis of the results of the initiative, especially the positive responses of policy-makers, the Task Force and the initiative's cosponsors decided to support the continued work of *Teaching and California's Future*. The research team from SRI International provided the Task Force with an update on the status of the teaching profession in December 2000, focusing on the progress in the policy arena in addressing the need to strengthen the skills and knowledge of the teacher workforce.[2]

During the 2000-01 school year, SRI launched another round of data collection. This work included a series of surveys:

- Current teacher survey (n=1,000)
- Principal survey (n=1,000)
- District administrator survey (n=300)

The teacher survey focused on teachers' preparation, job search, induction, workplace support, professional development, and compensation. The surveys of principals and district administrators focused heavily on recruitment and preparation, as well as workplace conditions and support for teachers. Detailed information on sampling methods, response patterns, and analytical procedures are found in Appendix A. Appendix B provides relevant statistical information for all survey data reported in this document.

To complement the statewide data gathered through the statewide surveys, SRI International conducted in-depth case studies of eight local systems of teacher development. The local system of teacher development includes the organizations and programs that serve both teachers in the workforce and individuals preparing to enter teaching. Each local system studied typically included four schools, a central office, and the surrounding teacher preparation programs, county offices, and other providers of support to teachers. Together, SRI visited 11 districts, 26 schools, 209 teachers, and 19 teacher preparation programs.[3]

The findings from these data collection efforts and from continued analysis of secondary databases in the state constitute the bulk of the report.

The Weak Data System

Throughout the past 4 years, the staff of the Center for the Future of Teaching and Learning and their partners in the policy community have been struck by the difficulty of getting ready access to information that policy-makers request to inform their work.

Simple questions such as how many teachers left the profession last year cannot be readily answered with current data systems. The underlying weakness stems from the fact that different state agencies—the California Department of Education, the California Commission on Teacher Credentialing, and the California State Teachers' Retirement System—maintain databases for their own purposes, but the databases cannot be used in combination to address specific policy questions. Throughout the report, we will point out where weaknesses in the data system make it difficult, if not impossible, to meet policy-makers' requests for timely information.

Organization of the Report

This document includes the main research findings of *Teaching and California's Future* and the detailed recommendations of the Task Force. The document is organized into two main parts. Part I addresses the issue of ensuring that every California schoolchild has a qualified and competent teacher. It includes chapters on the supply of and demand for teachers, the teacher preparation system, and the recruitment of teachers into the profession. Part II addresses the issue of building and maintaining the strengths of the current teacher workforce. It contains chapters on induction and professional development. In both parts, each chapter is preceded by a short synopsis of the key findings presented therein. Each part ends with key recommendations from the Task Force.

Endnotes

[1] Shields, P. M., Esch, C. E., Humphrey, D. C., Young, V. M., Gaston, M., & Hunt, H. (1999). *The status of the teaching profession: Research findings and policy recommendations. A report to the Teaching and California's Future Task Force.* Santa Cruz, CA: The Center for the Future of Teaching and Learning.

[2] Shields, P. M., Esch, C. E., Humphrey, D. C., Riehl, L. M., Tiffany-Morales, J. D., & Young, V. M. (2000). *The status of the teaching profession: 2000. An update to the Teaching and California's Future Task Force*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.

[3] At the request of the CSU system, visits to teacher preparation programs included four CSU campuses not associated with case study districts/areas.

Part I. Ensuring That Every California Schoolchild Has a Fully Prepared and Effective Teacher

The core goal of *Teaching and California's Future* is to ensure that every schoolchild in the state has a fully prepared and effective teacher. Related goals are that every district be able to attract and retain fully qualified teachers and that all pathways into teaching provide high-quality preparation for each participant.

The *Teaching and California's Future* research efforts are targeted at tracking the extent to which these goals are being realized throughout the state. In this part of the report, we address three basic questions. First, what progress is California making in addressing the shortage and maldistribution of fully prepared teachers? Second, how effectively is the system of teacher preparation addressing the demand for fully prepared and effective teachers? Third, what part does recruitment play in alleviating the shortage and maldistribution of fully prepared teachers?

The answers to all three *questions* are similar: much is being done, but additional efforts will be necessary to meet our goals. First, **the number of classroom teachers in the state without full credentials—underprepared teachers—has actually increased over the past 4 years, although it has leveled off as a proportion of the population of teachers at about 14%.** State programs designed to support underprepared teachers have grown dramatically during this period, so that the number of emergency permit holders and teachers on waivers not in one of these programs has actually begun to decline slightly. Unfortunately, we find no positive trends in terms of the maldistribution of underprepared teachers: students who are poor, minority, or English language learners or who attend a low-performing school are much more likely than their advantaged peers to have an underprepared teacher. Given the likelihood of rising retirement rates as baby boomers in the teaching profession age, we project continued shortfalls in the number of teachers fully prepared and willing to take jobs in the state's classrooms.

Second, this shortage of credentialed teachers has created a crisis of its own in the system of teacher *preparation*. Teacher education faculty are increasingly preparing students who are already teaching. **The incentive for prospective teachers to earn a credential before becoming a teacher has dissolved in many districts across the state.** The collapse of the incentive system has meant that teacher preparation programs increasingly get their students from the pool of teachers who are working in neighboring school districts but are not fully credentialed. Efforts to increase the production of teachers have resulted in an increased number of credentials—but more than half of this increase is for intern credentials awarded to individuals already in the classroom. What these numbers show is that recent policy initiatives have had only a minimal impact on the production of traditionally prepared teachers—individuals who go through a preparation program, earn a preliminary credential, and then begin to teach.

Third, the degree to which districts and schools suffer from a shortage of fully prepared teachers defines their *recruiting* challenge. Districts without teacher shortages can put substantial effort into finding candidates who match their needs well. **Hard-to-staff districts face a strikingly different task: simply finding enough applicants for the available jobs, regardless of qualifications.** Administrators in these districts have

to use more aggressive tactics, such as recruiting outside the field of education. Although the state's new investments in recruitment have just begun, our data suggest that improved and aggressive recruitment is a necessary but insufficient step toward providing every child in the state with a fully qualified teacher.

The shortage of fully prepared teachers willing to take jobs in the state's schools is having an impact far beyond the individual schools. The systems of preparing and recruiting new teachers into the *profession* are being radically altered in those areas where severe shortages exist. We devote the remainder of Part I of this report to the presentation of data to support these overall conclusions.

2. The Challenge of Ensuring That All Students Have a Qualified and Effective Teacher

Demand for Teachers

- Because of enrollment growth and class-size reduction, the demand for teachers in California escalated through the 1990s, from approximately 219,000 in 1991-92 to approximately 301,000 in 2000-01.
- The total teacher workforce is projected to grow to 309,000 in 2009-10. We estimate that California's districts will need to hire 195,000 additional teachers from 2001-02 to 2009-2010, as baby boomers move out of the workforce.

Supply of Teachers

- About half of all first-year teachers in California have not completed a preparation program.
- New credentials recommended by IHEs topped 18,000 in 1999-2000; however, over half of the growth in credentials from 1997-98 to 1999-2000 was from growth in intern credentials rather than preliminary credentials.
- University and district intern programs reported serving 7,236 interns in 2001-02.
- Pre-intern programs reported serving 10,534 individuals in 2001-02.

Underprepared Teachers and Their Distribution

- More than 42,000 classroom teachers—or 14% of the workforce—did not hold preliminary or professional clear credentials in 2000-01.
- Special education, math, science, and elementary continue to have the highest rates of underprepared teachers, and those rates have increased since 1997-98.
- Underprepared teachers are distributed unevenly throughout the state. Whereas almost half of schools had no or few underprepared teachers on staff in 2000-01, 24% of schools had more than 20% underprepared teachers.
- This maldistribution of underprepared teachers has worsened since 1997-98. On average, schools serving the poorest students and those serving the greatest numbers of minority students still have more than 20% underprepared teachers, compared with a school-level average of 12.5%.

Data Systems to Support Demand, Supply, and Distribution Policies

- California state agencies collect a wealth of data on credentialing, teacher assignment, and school characteristics.
- Linking teacher credentialing data to school-level data over time is critically important to accurately answer policy-relevant questions about teacher supply, demand, distribution, and mobility. However, current data systems do not have this capability.
- A unique teacher identifier, common across CTC and CDE, would link data from the two agencies and enable key longitudinal analyses.

For the past three years, Teaching and California's Future has documented the composition of the teacher workforce, with a focus on the number of teachers with full credentials and their distribution across the state's schools.[1] Here we update the available data through a review of trends in the demand for teachers and the supply of qualified teachers. These analyses provide the basis for an estimate of the projected demand for qualified teachers and the supply of such teachers in our classrooms. In particular, we focus on the distribution of fully prepared vs. underprepared teachers across schools and districts. Consistent with our findings from previous years, we describe a continued shortfall in fully prepared teachers willing to take jobs in California classrooms. Students in high-poverty schools, low-achieving schools, and schools with high proportions of ethnic minority students continue to be much more likely to have an underprepared teacher.

The Demand for Teachers in California's Classrooms

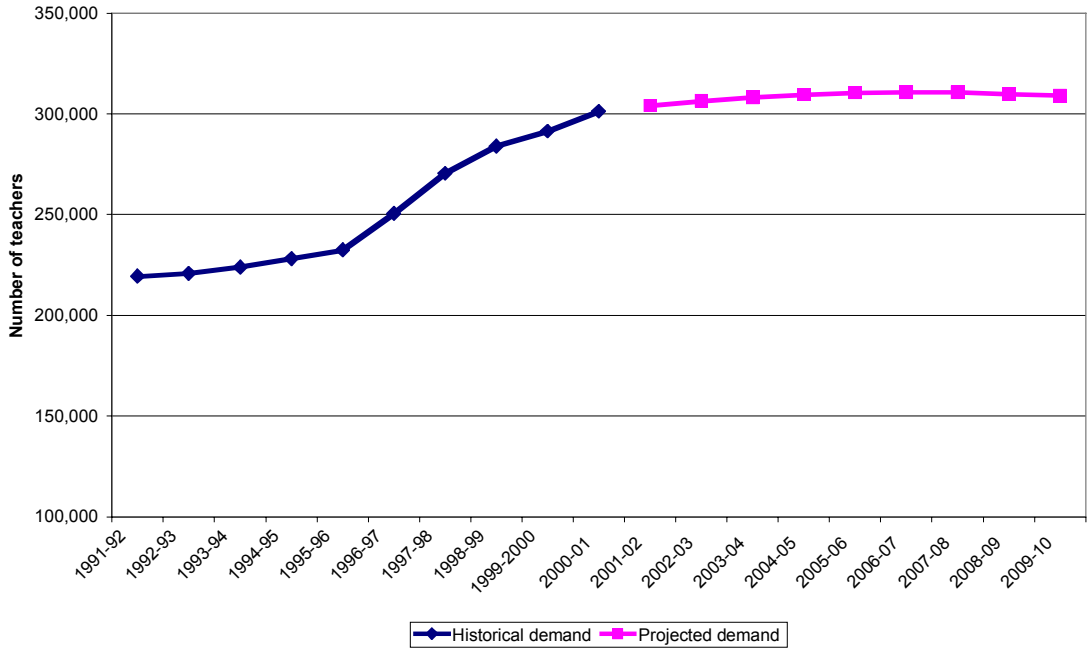
The demand for teachers in California has grown dramatically during the 1990s and is expected to continue upward, albeit at a slower rate. Through the past decade, the size of the teacher workforce has grown from approximately 219,300 teachers in K-12 classrooms throughout California in 1991-92 to approximately 301,300 teachers in 2000-01, an increase of 37%.[2]

This increase in the demand for teachers is driven by three factors. First is the growth in student enrollment. From 1991-92 to 2000-01, the number of students enrolled in California public schools grew by approximately 1 million, or 21%, and now totals more than 6 million.[3] Second, the implementation of class-size reduction (CSR), beginning in 1996-97, created the need for more teachers in grades K-3. Finally, regular attrition and retirement of working teachers generate demand for new teachers. In California, statewide data do not permit precise analyses of attrition and retirement. At best, we can estimate attrition and retirement by comparing annual changes in the number of teachers for each hypothetical cohort (as defined by years of teaching experience). We estimate that annual attrition is approximately 4.2% of the total workforce and retirement is approximately 1.7%.[4]

Looking forward, we can expect the demand for teachers to continue to grow. Student enrollment will rise over the medium term. From just over 6 million K-12 students in 2000-01, enrollment is projected to peak at 6.25 million in 2006-07 and then to decrease slightly, to 6.21 million in 2009-10, requiring 309,000 teachers in that year (Figure 2-1).[5] Attrition and retirement will further fuel demand for teachers, even as enrollment flattens. Indeed, we can expect teacher retirement rates to increase consistently—and perhaps dramatically—as baby boomers now reaching the height of their careers begin to retire. According to the annual report of the California State Teachers' Retirement System (STRS), almost 40% of all active STRS members were 50 years old or older in 1999-2000. At their average retirement age of 60, the majority of these members will retire by 2010.[6] Using conservative assumptions and STRS membership data, we estimate that the annual retirement *rate* for teachers will peak in 2007-08 at 4.9%. Thereafter, the retirement rate will begin to decline, but in 2009-10 it still will be approximately 4.1% of the workforce, compared with today's estimated rate of 1.7%.[7]

Figure 2-1

Historical and Projected Demand for Teachers in California, 1991-92 to 2009-10



Sources: CDE (1998a, 1999a, 2000b, 2001a).[8]

The Supply of Qualified Teachers in California's Classrooms

Is there a large enough supply of teachers to meet this demand? We define the supply of qualified teachers as the number of teachers who hold preliminary or professional clear credentials *and* who are willing to take jobs at the salary, assignment, location, and working conditions offered.

Each year, qualified teachers come from multiple sources. The largest is a base of veteran credentialed teachers continuing in the profession. In addition, there are teachers who left teaching for a period of time and later reenter the teacher workforce. Very little is known about the size of this reentrant pool in California, how many actually return to teaching each year, or the reasons why they decide to do so. Additional sources are newly credentialed teachers and out-of-state teachers, which we discuss in more detail below.

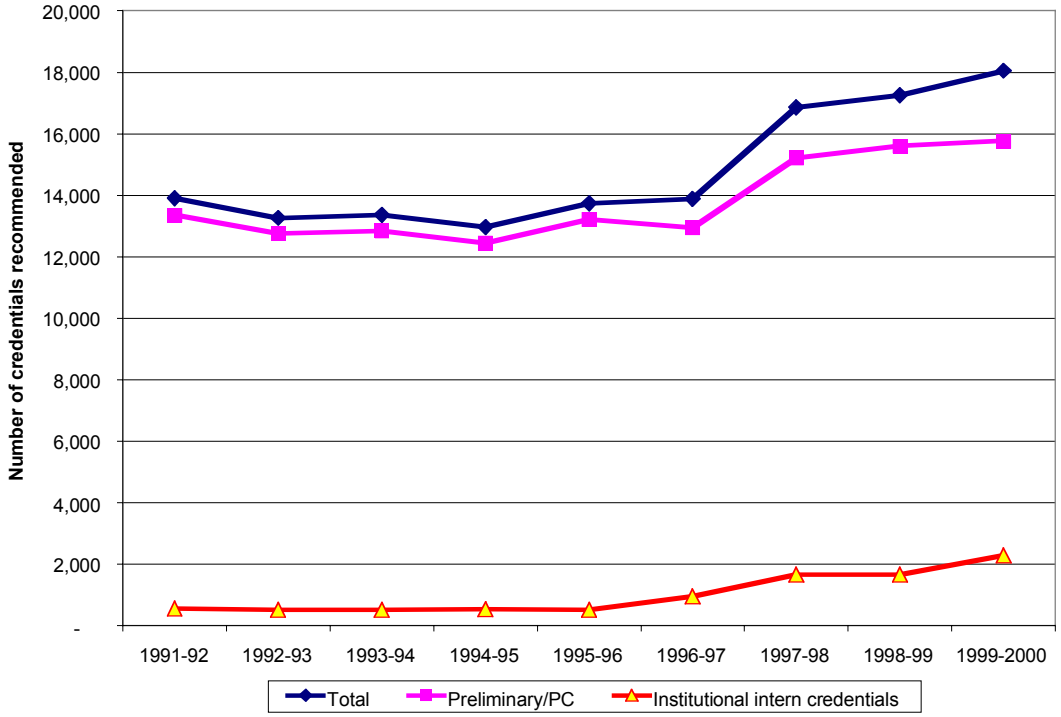
New Teachers Entering the Profession

Overall, the number of newly credentialed teachers prepared in California increased during the 1990s. After a slight decline during the first half of the decade, the number of first-time/new-type multiple- and single-subject preliminary, professional clear, and intern credentials recommended by IHEs began to rise in 1995-96. Approximately 18,000 such credentials were recommended in 1999-2000 (Figure 2-2), up from 13,700 in 1995-96. In the last 2 years, more than half of this growth has been due to intern rather than preliminary/professional clear credentials. In fact, since the middle of the 1990s, intern credentials more than tripled while first-time preliminary and professional clear credentials grew by 20%.

Not everyone attaining a teaching credential takes a job as a full-time K-12 teacher. In estimating the supply of new teachers, therefore, we need to know the percentage of new credential recipients who will take jobs. This information is not readily available because no state agency tracks credentialed candidates into the classroom. The California Commission on Teacher Credentialing (CTC) maintains data on individuals' credential status over time. The California Department of Education (CDE) collects teacher assignments. At present, there is no mechanism to link these sources of data.

Figure 2-2

First-Time and New-Type Multiple- and Single-Subject Preliminary, Professional Clear, and Intern Credentials Recommended by IHEs, 1991-92 to 1999-2000



Sources: CTC (1998a, 1998b, 1999a, 2000a, 2000b, 2001a).[9]

To estimate job-taking rates for new credential recipients, we merged a CTC data set on new credential recipients with a data set from the California State Teachers'

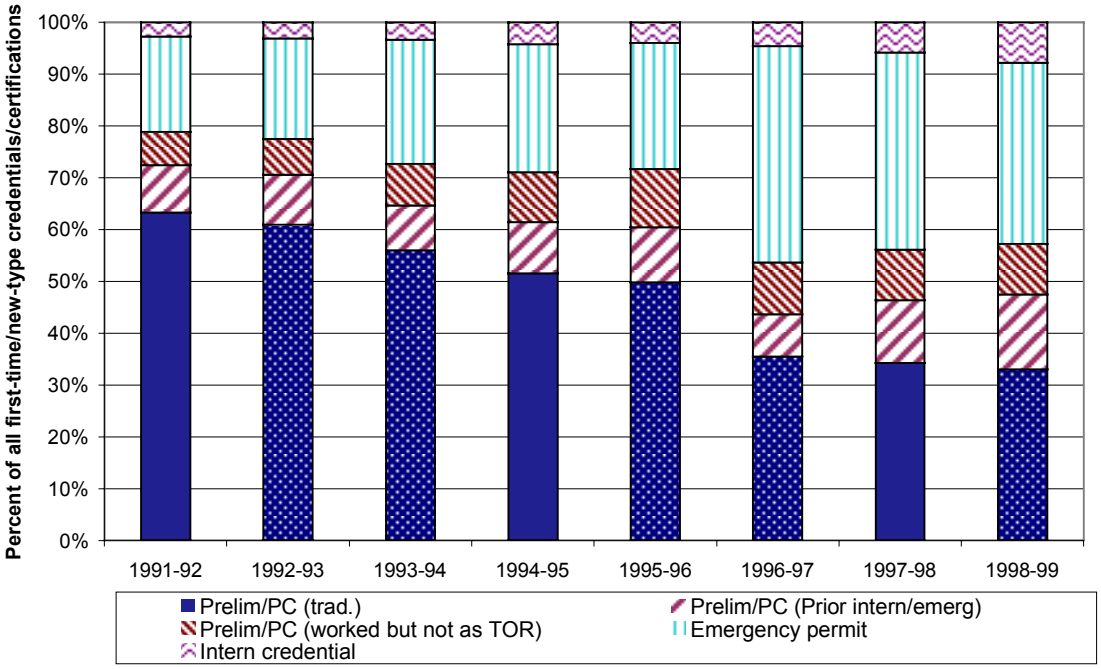
Retirement System. We then analyzed which credential recipients showed up in the STRS database, indicating that they were working in the public school system in some capacity. Although this analysis provided a number of insights into participation patterns in the teacher workforce, it had two major shortcomings. First, because the data had to be manually merged, we could only do this analysis for a limited number of years and could not update the numbers. Thus, the last year for which we have data is 1998-99. Second, participation in STRS is not equivalent to being a full-time teacher; the data set includes full-time and part-time positions, substitutes, and other types of public school system employees.

The first notable trend that emerged from this analysis is that of all first-time/new-type credentials and certifications issued by CTC, the percentages accounted for by emergency permits and intern credentials have grown year after year. Emergency permits for this group almost doubled, from 18% in 1991-92 to 35% in 1998-99. Intern credentials increased similarly, from 3% to 8% (Figure 2-3).

Not surprisingly, new preliminary-credential holders increasingly enter the profession by first obtaining an emergency permit, waiver, or intern credential. At the beginning of the 1990s, new preliminary-credential holders who previously had held emergency permits or intern credentials were 10% of all those receiving new teaching credentials and permits. By 1998-99, that number was 14%. Meanwhile, those with no previous certifications permitting them to be teachers of record (a proxy for a more traditional route into the profession) declined from 69% in 1991-92 to 43% in 1998-99.[10] Within even this more traditional path, we see a greater proportion that began contributing to STRS (and therefore were employed in the K-12 public school system in some capacity) before the issue date of their preliminary credential. These individuals may have been long-term substitutes, for example. New preliminary-credential recipients who worked (but not as teacher of record) before the issue date represented 6% of all new teaching credentials and permits in 1991-92 and 10% in 1998-99. This shift in how individuals enter the profession has important implications for both preparation and induction, as we will discuss later in this report.

Figure 2-3

Breakdown of First-Time/New-Type Preliminary/Professional Clear and Intern Credentials and Emergency Permits, 1991-92 to 1998-99



Source: SRI analysis of CTC and STRS data.[11] *TOR is teacher of record.*

The analysis of the combined CTC and STRS data also illuminated the workforce participation patterns of newly credentialed teachers. In addition to revealing the percentage of credential recipients who were already employed in the K-12 school system either as teacher of record or otherwise, before their credentials were issued, the analysis provided an estimate of the percentage of new credential holders who enter the K-12 public school job market 2 or more years after their credentials are issued. Also, we were able to obtain a much more accurate estimate of the percentage of new preliminary-credential holders who never took jobs (as measured by contribution to STRS), which steadily declined from almost 20% in 1991-92 to 13% in 1996-97.[12] These numbers are much lower than estimated in previous reports, which were based on limited surveys and studies from other states and which failed to take into account individuals already employed in the K-12 system and those who took jobs later.[13]

The key findings from this analysis are that as the 1990s progressed, teacher candidates entered paid positions in the K-12 public school system earlier, through emergency and intern routes, as well as in capacities other than as teacher of record, and the percentage of those with new preliminary credentials who took jobs in K-12 increased.

Credentialed Teachers Prepared in Other States

The final source of qualified teachers is credentialed teachers prepared in other states. Since 1998, the legislature has enacted several policies to lower barriers and make it easier for these teachers to enter the California teaching workforce. First, AB 1620 (1998) called for CTC to review program standards and requirements in other states and to establish reciprocity agreements with those states that demonstrate teacher preparation comparable to California's. As a result, 37 states were found to have comparable elementary, secondary, or special education teacher preparation *programs*. Eighteen states have comparable elementary and/or secondary *credentials*, and 35 states have comparable special education credentials in one or more areas. CTC has approved 164 recommendations of *subject matter* comparability from 27 states, and 123 recommendations from another 21 states are pending.[14] Second, AB 877 (2000) decouples program, credential, and subject matter comparability, thereby allowing out-of-state candidates to meet partial requirements through comparability.[15]

The number of teaching credentials that CTC grants to teachers prepared out-of-state has fluctuated since the mid-1990s, ranging from 1,600 to 5,400. It is too soon to track the long-term impact of these new policies on the number of out-of-state teachers entering California's classrooms; however, the numbers have declined from 5,400 in 1997-98 to just over 3,800 in 1999-2000.[16]

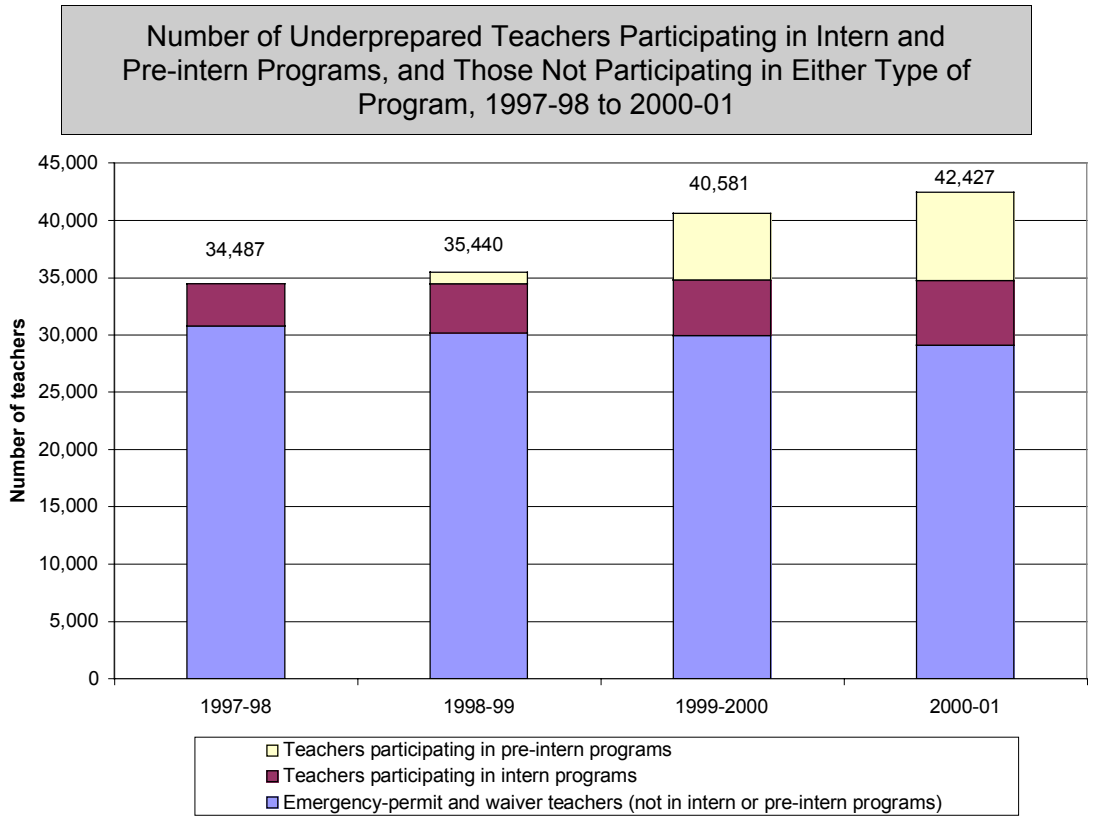
New Classroom Teachers without Full Credentials

The high demand for classroom teachers through the 1990s has resulted in the hiring of thousands of classroom teachers who have not completed a preparation program and who do not hold full teaching credentials. This group encompasses interns, pre-interns, and individuals on emergency permits or waivers, and they vary considerably in experience, knowledge, and skills. We use the term *underprepared* to describe this group because they do not have the full credential required for their assignment. In doing so, we recognize that credential status is an inadequate proxy for teacher quality. Rather, we view the preliminary credential as the threshold over which teachers must cross on their way to becoming experienced and accomplished educators.

Figure 2-4 illustrates the number of underprepared teachers who are participating in intern or pre-intern programs and those on emergency permits or waivers who are not participating in either of these programs.[17] Since 1997-98, the total number of underprepared teachers has increased by almost 8,000 (23%), reaching more than 42,000 in 2000-01. The proportion of underprepared teachers in the total workforce also has risen slightly, from 12.7% in 1997-1998 to 14% in 1999-2000 and 2000-01.[18]

However, the composition of this group of underprepared teachers is changing as a result of the rapid increase in the pre-intern and intern programs. Participants in intern programs have a bachelor's degree and have passed subject matter requirements. While working as the teacher of record, interns are enrolled in a planned course of study and receive support from mentor teachers and/or IHE faculty. In contrast, pre-interns may or may not be enrolled in a preparation program, have not met subject matter requirements, and receive limited support through a pre-intern program while being the teacher of record. We discuss the strengths and weaknesses of these programs in Chapter 4 of this report. Figure 2-4 shows that the number of participants in these programs has more than tripled over the past 4 years.

Figure 2-4



Sources: CDE (1998c, 1999b, 2000c, 2001c).[19]

In contrast, the number of teachers on emergency permits and waivers not participating in these programs has actually decreased slightly over the same period (from 30,781 to 29,084).[*] The total number of emergency permits and waivers is higher than these figures because some individuals in those categories participate in pre-intern and intern programs. We know from different sources that for the first half of the 1990s, the number of classroom teachers holding multiple-subject, single-subject, or education specialist emergency permits ranged from about 12,000 to more than 16,000, representing from 5.5% to 7.6% of the teacher workforce. Following the implementation of class-size reduction, the number of teachers with emergency permits increased to more than 18,000 in 1996-97 and climbed to 34,309 in 1999-2000, or about 12% of the workforce.[20]

[*] The minimum requirements for an emergency single- or multiple-subject teaching permit are completion of a bachelor's degree, passage of the California Basic Education Skills Test (CBEST), and verification of subject matter competence at a level established in regulation for the emergency permit. Individuals serving on an emergency permit must enroll in a CTC-approved professional preparation program for the credential and complete a minimum of six semester units of coursework each year to renew the permit. Emergency permits can be renewed for only five consecutive years, after which individuals on emergency permits wishing to remain in teaching must obtain a preliminary or professional clear credential.

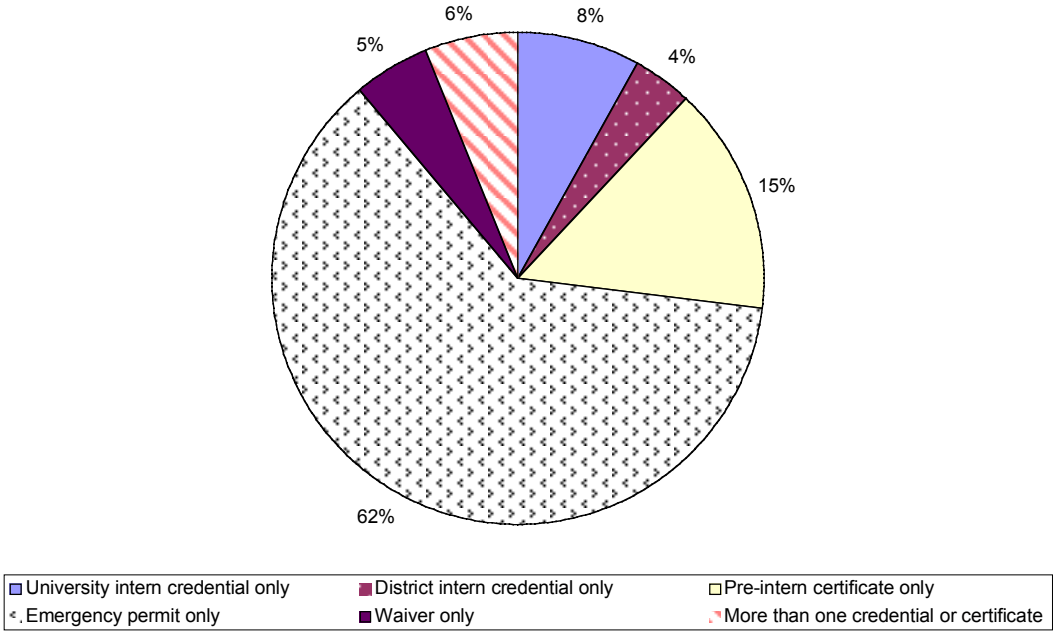
Additionally, individuals are given waivers if they are not able to fulfill the requirements for an emergency permit. In 1999-2000, more than 3,000 single-subject, multiple-subject, or special education waivers were issued, more than 2,400 of which were in special education.[21] Special education is a particularly difficult area for which to find fully credentialed teachers, even in wealthier and more attractive districts.

The Case of First-Year Teachers

These trends in the overall composition of the teacher workforce hide differences across teachers with different tenures in the workforce. Teachers can hold emergency permits, intern credentials, and pre-intern certificates for only set amounts of time. Consequently, veteran teachers are much less likely to fall into the underprepared category. Although some teachers with significant experience may be teaching out of field, the vast majority of underprepared teachers are in their first years of teaching. In fact, CDE data show that half (51%) of all first-year teachers are underprepared.[22] Of those first-year teachers who were underprepared, more than 60% are teaching on emergency credentials (Figure 2-5).

Figure 2-5

Credentials Reported by Underprepared First-Year Teachers, 2000-01



Source: CDE (2001d).[23]

Shortages by Assignment Area

Certain subject areas face more severe shortages than others and, as a result, have disproportionate percentages of underprepared teachers, as detailed in Table 2-1. The largest group of teachers are in elementary schools, and they stand at 13% underprepared. Some data suggest that the most severe problems are at the 4th- and 5th- grade levels since qualified teachers flock to the early grades where class-size reduction keeps classes small.[24] Among secondary subjects, math and physical science

suffer the largest shortages, both with 14% underprepared, compared with 10% across all secondary teachers. The situation is the worst in special education, where 17% do not have full credentials.

Table 2-1

Percentage of Teachers Who Are Underprepared, by Assignment, 2000-01

Assignment	Percent of Teachers with Assignment Who Are Underprepared	Teachers with This Assignment as Percent of All Teachers
Elementary	13%	63%
All secondary	10%	31%
Math	14%	7%
Physical science	14%	4%
Life science	12%	5%
English	9%	13%
Social science	6%	12%
Special education	17%	12%

Source: CDE (2001d).[25]

Changes in the percentage of teachers who are underprepared also vary by assignment area. Underprepared elementary teachers have increased only 2 percentage points, from 11%, in 1997-98. By contrast, underprepared teachers of English, mathematics, physical science, and special education have each gone up 4 percentage points, from 5%, 10%, 10%, and 13%, respectively, in 1997-98. Life science teachers now have 12% underprepared in their ranks, up from 9% in 1997-98.[26]

Projecting the Gap between Demand and Supply

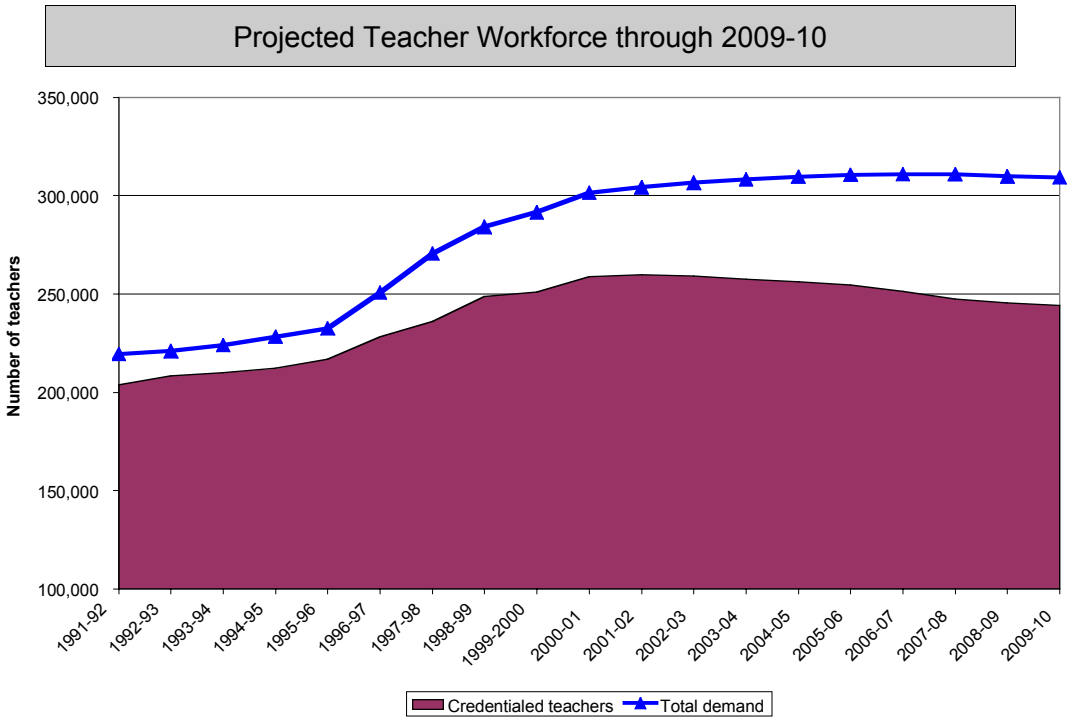
A continuing demand for teachers raises the question of whether California will be able to produce enough credentialed teachers to keep pace with new demand, as well as reduce the current numbers of underprepared teachers in its classrooms, while achieving high-quality teacher preparation. In this section, we present basic projections of the teacher labor market through 2009-10. Projections for the California teacher workforce are imprecise because historical and current data do not permit accurate estimates of participation, attrition, and retirement, as we mentioned above. Our purpose here is not to present definitive projections of a future shortfall or surplus of teachers, but rather to propose a reasonable set of outcomes based on the best available data of historical trends.

Figure 2-6 illustrates future demand for teachers, compared with a projected shortfall of qualified teachers at the current levels of credential production, participation, attrition, and retirement. As discussed earlier, student enrollment is expected to reach 6.25 million in 2006-07, then fall to 6.21 million by 2009-10. Thus, the

teacher workforce will flatten out beginning in 2006-07 and total 309,000 by 2009-10. As also discussed earlier, we assume an annual attrition of 4.2%, and we factor in the anticipated retirement bulge, the highest rate reaching 4.9% in 2007-08. On the basis of these assumptions, we project 195,000 new hires from 2001-02 to 2009-10.[27]

Despite a slowdown in overall demand, increasing retirement rates and a relatively flat supply of fully credentialed teachers result in a widening gap through the next decade. As Figure 2-6 illustrates, a gap of around 65,000 teachers may still persist in 2009-10. We caution the reader that these are only estimates based on the best data available to us. Exogenous conditions, particularly changes in the availability of attractive jobs in the private sector, may the influence the number of individuals attracted to the teaching profession, the number of individuals who choose to take jobs after attaining a credential, and the number of individuals willing to reenter the profession.

Figure 2-6



Source: SRI analysis.[28]

As deeply troubling as the idea of having tens of thousands of underprepared teachers in today's classrooms is, the most disturbing aspect of the shortage is its disproportionate concentration in urban schools, low-performing schools, schools serving poor students, and those serving high proportions of minority students. We turn next to a more detailed discussion of the distribution of underprepared teachers by school-level characteristics.

The Distribution of Underprepared Teachers in California's Classrooms

Where are California's underprepared teachers? As we described above, 14% of all classroom teachers in California are underprepared. Schools *average* 12.5%

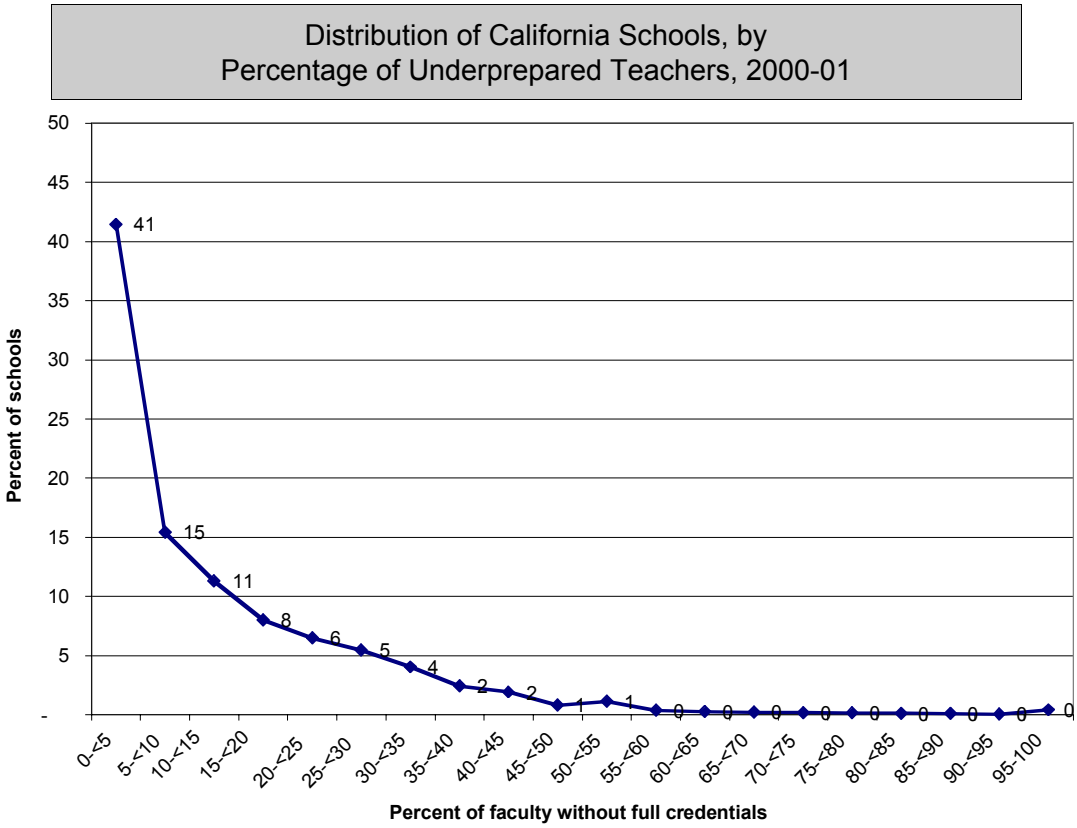
underprepared among the teachers on staff. The average, however, masks the uneven distribution of underprepared teachers among schools.

Statewide Distribution of Underprepared Teachers

In two previous reports, we documented the degree of maldistribution of the state's underprepared teachers.[29] Data from 2000-01 show that, in general, underprepared teachers remain drastically *un*evenly distributed (Figure 2-7). As in those reports, we focus on the proportion of schools with no or very few underprepared teachers and those with large proportions of underprepared teachers. In 2000-01, 28% of the schools had no underqualified teachers, the same as the preceding year, but compared with just 24% reported in 1997-98. Forty-one percent of the schools had fewer than 5% underprepared teachers on their staff, compared with 39% in 1999-2000 and 39% in 1997-98. In our case studies, schools in this category often were hiring candidates who met certain school needs but who did not have full credentials, or the schools had difficulty finding fully prepared candidates in one area, like special education or mathematics. Although this presented a challenge to the schools, it did not cause severe problems and typically affected only a small portion of the students in a school.

In contrast, almost one-quarter (24%) of California schools had 20% or more underprepared teachers, the same percentage as reported in 1999-2000, but up from 21% reported in 1998-99 and 20% in 1997-98. In our case studies, these were schools that were having trouble attracting teachers across grade levels and subject areas. In these schools, as students proceeded through the grades or moved through classes in different subject areas, they were highly likely to have an underprepared teacher. For example, at the secondary school level, each student probably would be in the class of an underprepared teacher one period per day. This most critically affected subset of schools includes more than 1,900 schools, which enroll more than 1.7 million children in total.

Figure 2-7



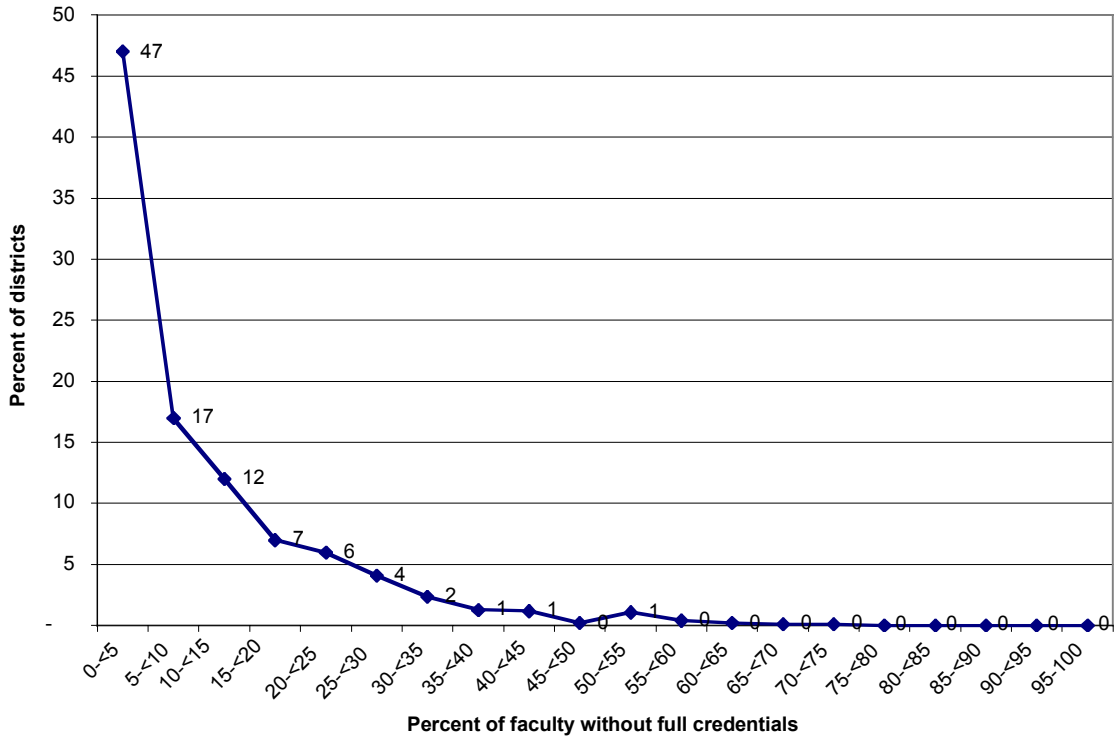
Sources: CDE (2001c), SRI analysis.[30]

Distribution of Underprepared Teachers between Districts

Concentrations of underprepared teachers are not limited to a few large districts; indeed, more districts today have high numbers of underprepared teachers than did 4 years ago. As Figure 2-8 shows, in 2000-01, 17%—or approximately one in every six California school districts—were reported to have 20% or more underprepared teachers, up from about 14% in 1999-2000 and 12% in the previous 2 years. The percentage of districts with at least 20% of their teachers underprepared is increasing. At the low end of the distribution, 47% of the state's school districts have fewer than 5% underprepared teachers, compared with 50% in 1999-2000. One-quarter (25%) have no underprepared teachers at all (compared with 26% in 1999-2000 and 1998-99, but 3 percentage points more than in 1997-98).

Figure 2-8

Distribution of California School Districts, by Percentage of Underprepared Teachers, 2000-01



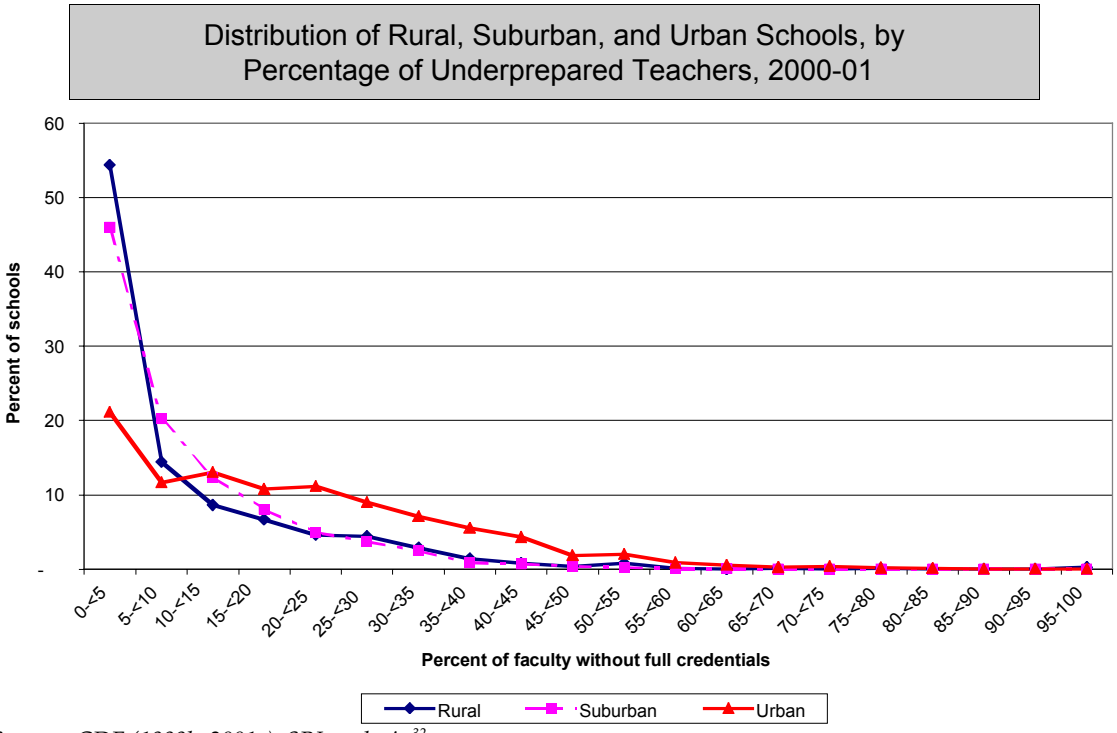
Sources: CDE (2001c), SRI analysis.[31]

Distribution of Underprepared Teachers by School Characteristics

In what types of schools do underprepared teachers work? And what types of students do schools with the highest numbers of underprepared teachers serve? The bottom line is that urban schools, the lowest-performing schools, and schools with high numbers of poor and minority students bear the brunt of the maldistribution of underprepared teachers. We display the evidence in this section.

Urbanicity. Overall, urban areas face more severe shortages than suburban and rural areas. Urban schools, on average, had about 19% underprepared teachers in 2000-01, whereas suburban schools and rural schools had about 9%. As Figure 2-9 shows, about half of schools in the rural and suburban districts (54% and 46%, respectively) had fewer than 5% underprepared teachers. In contrast, only 21% of urban schools had fewer than 5% underprepared teachers, and 43% had 20% or more underprepared teachers in their classrooms.

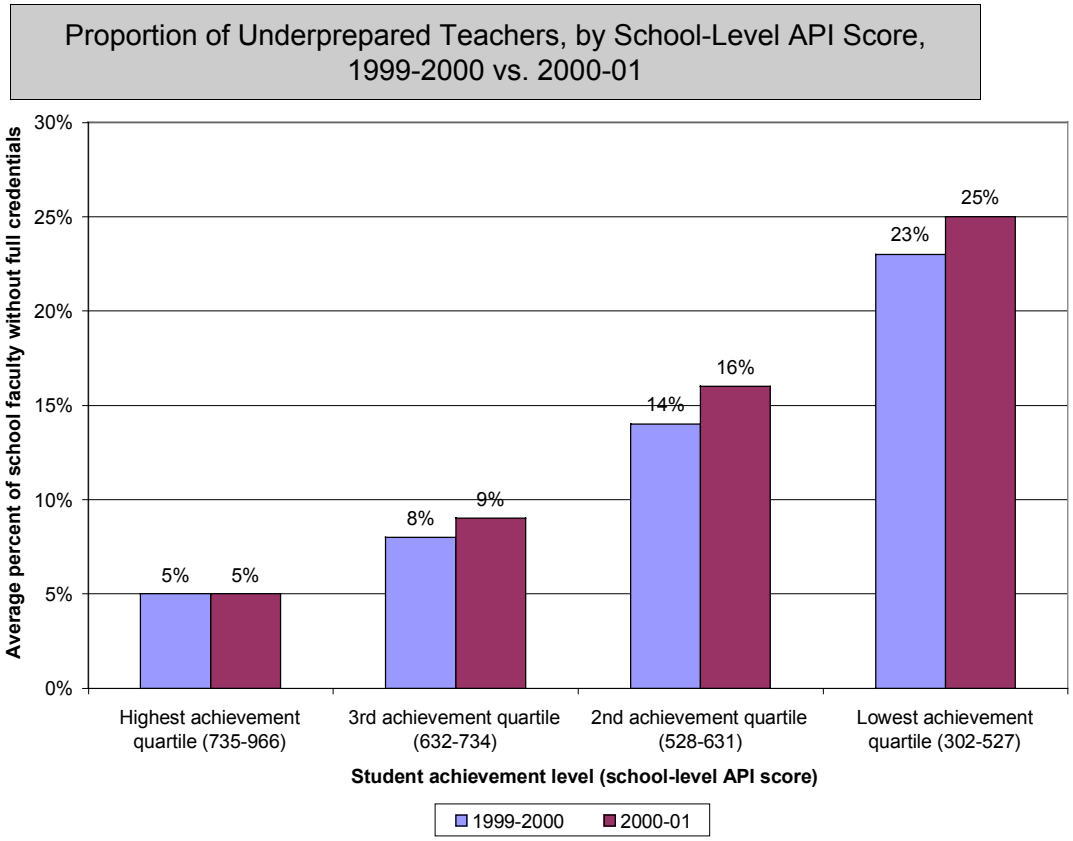
Figure 2-9



Sources: CDE (1999b, 2001c), SRI analysis.[32]

Student Achievement. Students already exhibiting low academic performance—those most in need of investment and effective intervention—have a higher probability of being taught by an underprepared teacher. Analysis of school-level scores on the state's Academic Performance Index (API) shows that, on average, the lowest-performing schools had 25% underprepared teachers in 2000-01. This is double the state average and 5 times the proportion of underprepared teachers at high-achieving schools (Figure 2-10). Moreover, the average proporation of underprepared teachers in the lowest-performing schools increased by 2 percentage points over the preceding year.

Figure 2-10



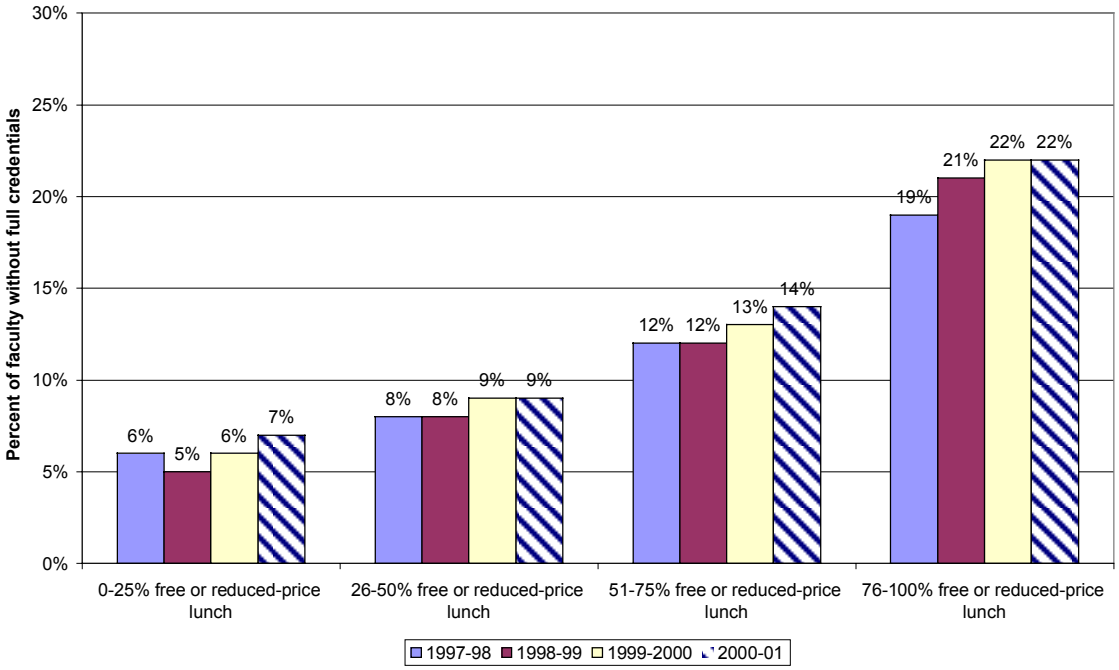
Sources: CDE (2000c, 2000e, 2001c), SRI analysis.[33]

Student Poverty and Minority Levels. Figures 2-11 and 2-12 illustrate the trends for the state as a whole, disaggregated by student poverty and minority levels. The percentage of teachers who are underprepared is directly related to the percentage of students on free or reduced-price lunch and to the percentage of students who are ethnic or racial minorities at that school.

As Figure 2-11 shows, average percentage of underprepared teachers appears to have increased over the past 4 years for all schools, regardless of the poverty level of their students. Schools with the highest percentages of students receiving a free or reduced-price lunch (a proxy for the poverty level of the student population) continue to have the highest percentages of underprepared teachers. In 2000-01, schools in which more than 75% of the students received a free or reduced-price lunch had, on average, 22% underprepared teachers on staff, similar to the past two years but up from 19% in 1997-98.[34] It is important to note that 1,700 schools—almost a quarter of all California schools included in this analysis—fall into the highest poverty category. In schools where 25% or fewer students received a free or reduced-price lunch, there were, on average, only 7% underprepared teachers, up from 6% in 1999-2000.

Figure 2-11

Distribution of Underprepared Teachers, by Student Poverty Level, 1997-98 to 2000-01

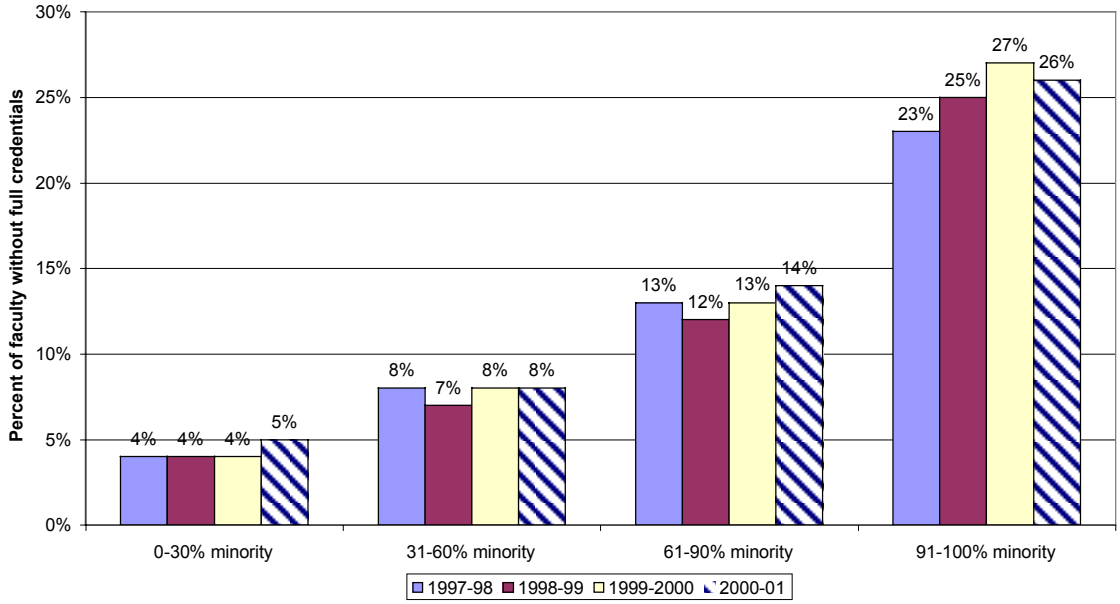


Sources: CDE (1998c, 1999b, 2000c, 2001e), SRI analysis.[35]

A similar pattern emerges when examining schools by student minority level (Figure 2-12).

Figure 2-12

Distribution of Underprepared Teachers, by Percentage of Minority Students,1997-98 to 2000-01



Sources: CDE (1998, 1999, 2000, 2001c), SRI analysis.[36]

Investing in Better Data

Teaching and California's Future rests on a central premise that policy-makers need access to accurate information if they are to devise policies designed to ensure that every California school child has a qualified and effective teacher. Yet a careful reader of the foregoing text would find gaps and unevenness in the analysis. To describe the pipeline into teaching—entrance into teacher preparation programs, completion of preparation, recruitment into and acceptance of teaching jobs, and retention in or attrition from those jobs—and to describe how cohorts of individuals move through that pipeline over time, we have had to patch together data from a variety of databases and agencies. Consequently, for certain questions, we provide data from different years. For example, we can report on the number of interns and pre-interns for 2001-02, but the latest data available on emergency permit holders are from 1999-2000. For other concerns, we can provide only outdated information. For example, our analysis of job taking ends with the 1997-98 school year. For still other policy issues, exact information is simply not available. For example, we do not have accurate attrition data—how many teachers leave the workforce each year. And for many important issues regarding job taking, movement of teachers across schools, and attrition of teachers, we do have no data that describe trends across schools serving different kinds of students.

Reliable and timely data on teacher supply, demand, distribution, and mobility are critical to researchers and policy-makers for several reasons. First, they are needed to diagnose leakages in the pipeline of teacher supply: at what *points* of the pipeline and at what *rates* do candidates enter and teachers leave the profession? Second, data are

required to estimate reliably the future supply of and demand for qualified teachers. Such projections help policy-makers determine the need for policies aimed at recruiting and preparing more teachers. Third, these data can illuminate the dynamics of the teacher labor market that result in the observed maldistribution of underprepared teachers. Last, researchers can use data to identify and survey individuals associated with each point of leakage in the pipeline, specifically those who do not take teaching jobs, those who leave within the first few years of teaching, and those who leave teaching but eventually return to the teaching workforce.

Our experience with using data from various state agencies underscores the need for (1) direct measurement of the components of supply (new credentials issued and workplace participation) and demand (attrition and retirement); (2) longitudinal data on individuals; and (3) the linking of data on credentialing to school and district characteristics. Each of these issues could be addressed by collecting teacher-level data over time *with a unique teacher identifier* used by both CDE and CTC. It is only by using a unique teacher identifier, common across both CDE and CTC, that we can understand workforce participation by different routes into the profession and by different types of schools, for example. The unique identifier also allows longitudinal data collection, thus providing direct measures of mobility between schools and districts, attrition from the profession, and reentry by former teachers, which heretofore were impossible to determine. Finally, it is only by linking credentialing from CTC and teacher assignment and school characteristics data from CDE that we can answer questions about the types of schools teachers tend to stay in or leave, and the students these schools serve.

Endnotes

[1] Shields, P. M., Marsh, J. M., & Powell, J. (1998). *An inventory of the status of teacher development in California*. Menlo Park, CA: SRI International.

Shields, P. M., Esch, C. E., Humphrey, D. C., Young, V. M., Gaston, M., & Hunt, H. (1999). *The status of the teaching profession: Research findings and policy. A report to the Teaching and California's Future Task Force*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.

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[2] California Department of Education (CDE), Educational Demographics Unit, Research, Evaluation and Technology Division. (1997, August). *Number, percent, and average salary of new teachers in California public schools: 1981-82 through 1996-97 (one year of total educational service).* Sacramento, CA: Author.

California Department of Education (CDE), Educational Demographics Unit. (2001a). *Number of teachers in California public schools by ethnic designation and gender, 2000-01.* Retrieved July 2001 on the World Wide Web: http://data1.cde.ca.gov/dataquest.

[3] California Department of Education (CDE), Educational Demographics Unit. (2001b). *Statewide enrollment in California public schools by ethnic designation, 2000-01.* Retrieved July 2001 on the World Wide Web: http://data1.cde.ca.gov/dataquest. CDE began including students under the California Youth Authority in 1998.

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[4] Using the Professional Assignment Information Form (PAIF) for 1990-91, 1992-93, and 1994-95 through 2000-01, hypothetical cohorts were constructed using reported years of experience. That is, teachers reporting 1 year of *teaching* experience in the first year were assumed to be the same cohort as the teachers reporting 2 years of experience in the second year, and so on. Annual change in the number of teachers in each cohort was calculated for all years. The change in the number of teachers across all cohorts is equivalent to the total number of teachers who left the California teacher workforce that year. Teachers reporting more than 25 years of teaching experience were assumed to have retired, and those with up to 25 years of experience were treated as attrition. Teachers from out-of-state or former teachers reentering the workforce would result in understatement of the number of teachers leaving a particular cohort for that year, assuming that out-of-state and former teachers reported their actual years of teaching experience. Thus, our estimates are somewhat conservative. Across the years of analysis stated above, the average attrition rate using this method was 4.2% and the retirement rate 1.7%.

The method of reconstructing cohorts replicates the method used by Fetler (1997), with one important exception. Fetler created the cohorts using years of employment in the same district, rather than years of experience. He estimated average attrition and retirement of 8%; however, this includes not only those teachers leaving the California workforce but also those changing jobs across district lines. In other words, it overstates attrition and retirement.

Fetler, M. (1997, January). Where have all the teachers gone? *Education policy analysis archives, 5*(2).

[5] California Department of Education (CDE), Educational Demographics Unit. (2001b). *Statewide enrollment in California public schools by ethnic designation, 2000-01.* Retrieved July 2001 on the World Wide Web: http://data1.cde.ca.gov/dataquest.

California State Department of Finance. (2000). *California K-12 public enrollment projections by ethnicity, 2000 series.* Retrieved July 2001 from the World Wide Web: http://www.dof.ca.gov/html/demograp/k12ethtb.htm.

SRI analysis.

Note: Because CDE includes students under the California Youth Authority, whereas DOF does not, the *rate* of growth used in the DOF projections from 2001-02 through 2009-2010 is applied to the student enrollment CDE reported in 2000-01.

[6] California State Teachers' Retirement System (STRS). (2001, January 1). "Population information for fiscal year 1999-2000 (As of June 30, 2000)," *California State Teachers' Retirement System and related issues*. Sacramento, CA: Author.

Note: STRS membership data include K-12 classroom teachers, community college faculty, and some nonclassroom personnel. The data cannot be disaggregated to analyze these groups separately.

[7] California State Teachers' Retirement System (STRS). (2001, January 1). "Population information for fiscal year 1999-2000 (As of June 30, 2000)," *California State Teachers' Retirement System and related issues*. Sacramento, CA: Author.

SRI analysis. Retirement rate projections use age cohort data for STRS membership. We estimate that, in 2007-08, the retirement rate for STRS members at the average reported age of 60 will reach 2.88 times the average retirement rate between 1991-92 and 1999-2000, and 2.43 times by 2009-2010.

[8] California Department of Education (CDE), Educational Demographics Unit. (1998a). *Number of teachers in California public schools by ethnic group, 1981-82 through 1997-98.* Retrieved 2000 from the World Wide Web: http://www.cde.ca.gov/demographics/reports/statewide/ethteacher.htm.

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CDE, Educational Demographics Unit. (2001a). *Number of teachers in California public schools by ethnic designation and gender, 2000-01.* Retrieved July 2001 on the World Wide Web: http://data1.cde.ca.gov/dataquest.

[9] California Commission on Teacher Credentialing (CTC). (1998a). *Numbers of multiple and single subject teaching credentials issued by the Commission upon the recommendation of California institutions of higher education with Commission-approved programs*. Sacramento, CA: Author.

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CTC. (1999a). *Report on the number of individuals receiving California certification.* Sacramento, CA: Author.

CTC. (2000a). *Credentials granted during the fiscal year 1998-99*. Sacramento, CA: Author.

CTC. (2000b). Personal communication.

CTC. (2001a). Personal communication.

Note: For total credentials: Data for years 1991-92 to 1996-97 are from CTC (1998b); data for 1997-98 are from CTC (1999b); data for 1998-99 are from CTC (2000a); data for 1999-2000 are from CTC (2001). Annual totals include first-time and new-type, multiple- and single-subject credentials. Totals include internship, preliminary, and professional clear credentials.

For intern credentials: Data for years 1991-92 to 1997-98 are from CTC (1998b). Data for 1998-99 are from CTC (2000b), and data for 1999-2000 are from CTC (2001a).

The preliminary/professional clear credentials were computed by subtracting the intern credentials from the total number of credentials for each year.

[10] These include those labeled in the figure as Prelim/PC (trad) and Prelim/PC (worked but not as TOR).

[11] By special request, CTC and STRS provided data to SRI in 2000 on credentialing and contribution to STRS 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.

[12] Ibid.

[13] We initially addressed this issue of job taking in Shields, P. M., Esch, C. E., Humphrey, D. C., Young, V. M., Gaston, M., & Hunt, H. (1999). *The status of the teaching profession: Research findings and policy. A report to the Teaching and California's Future Task Force*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.

[14] CTC. (2001b, January). *Approval of subject matter preparation programs submitted by colleges and universities, designated subjects programs submitted by colleges, universities and local education agencies, and recommendations of subject matter comparability for reciprocity.* Downloaded 2001 from the World Wide Web: http://www.ctc.ca.gov/aboutctc/agendas/january_2001/prep/prep1.html.

[15] California State Assembly. (2000). Assembly Bill 877. Retrieved August 1, 2001, from the World Wide Web: http://www.sen.ca.gov/.

[16] CTC. (2001c). *Teachers meeting standards for professional certification in California: Second annual report.* Sacramento, CA: Author.

CTC. (2001a). Personal communication.

[17] CDE collects data on whether teachers have "full credentials," defined as professional clear or preliminary.

California Department of Education (CDE), Educational Demographics Unit. (1999b). *Teacher credentials and experience by school.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

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[18] Ibid.

Note: Respondents may report more than one of the following categories: university intern, district intern, pre-intern, emergency, and waiver. Moreover, intern and pre-intern programs may serve *individuals* who hold emergency permits, not only those holding intern credentials or pre-intern certificates. Therefore, it is impossible to accurately disaggregate the total number of individuals without full credentials into emergency, intern, and pre-intern categories.

[19] California Department of Education (CDE), Educational Demographics Unit. (1998c). *Teacher credentials and experience by school.*

California Department of Education (CDE), Educational Demographics Unit. (1999b). *Teacher credentials and experience by school.* Retrieved 2000 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

California Department of Education (CDE), Educational Demographics Unit. (2000c). *Teacher credentials and experience by school.* Retrieved 2000 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

California Department of Education (CDE), Educational Demographics Unit. (2001c). *Teacher credentials and experience by school.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

[20] California Commission on Teacher Credentialing (CTC). (1998c). *Six year report on emergency permits issued during fiscal years 1991 through 6/30/1997.* Sacramento, CA: Author.

CTC. (1999b). *Totals of credentials granted fiscal year 1997/98.* Sacramento, CA: Author.

CTC. (2000a). *Credentials granted during the fiscal year 1998/99.* Sacramento, CA: Author.

CTC. (2001a). Personal communication.

California Department of Education (CDE), Educational Demographics Unit. (2001a). *Number of teachers in California public schools by ethnic designation and gender, 2000-01.* Retrieved July 2001 on the

World Wide Web: http://data1.cde.ca.gov/dataquest.

Note: Data for years 1991-92 to 1996-97 are from CTC (1998c); data for year 1997-98 are from CTC (1999b); data for year 1998-99 are from CTC (2000a), data for 1999-2000 are from CTC (2001a). Annual totals include first-time, new-type, and renewals for multiple-subject, single-subject, and special education credentials, and both limited-assignment and long-term permits. Totals for years 1997-98 and 1998-99 include special education permits issued under both the new and old regulations. Because of a change in CTC's reporting policy, totals from 1991-92 to 1996-97 are workload numbers; totals from 1997-98 indicate the number of permits actually issued by CTC. Totals from 1998-99 are workload numbers. CTC estimates that workload numbers are within 1% to 5% of the total number actually issued. The percentage of the workforce holding emergency credentials is calculated by dividing 34,801 (emergency credentials) by 291,441 (total number of teachers) from CDE (2000d).

[21] California Commission on Teacher Credentialing (CTC). (2001a). Personal communication.

[22] California Department of Education (CDE), Educational Demographics Unit. (2001d). *Professional Assignment Information Form, 2000-01*. Sacramento, CA: Author.

[23] The percentages were estimated by dividing the total number of program participants as reported by CTC (2001d) in *Report on the issuance of internships and pre-internship grants for 2001-2002 and proposal to issue a contract for external evaluation of internship programs* by the total number of noncredentialed teachers as reported by CDE (2001d) in PAIF 2000-01.

[24] Stecher, B. M. & Bohrnstedt, G. W. (Eds.). 2000. *Class size reduction in California: The 1998-99 evaluation findings.* Sacramento, CA: California Department of Education.

[25] California Department of Education (CDE), Educational Demographics Unit. (2001d). *Professional Assignment Information Form, 2000-01*. Sacramento, CA: Author.

Note: The percentage of underprepared teachers is calculated as the percentage of full-time teachers by assignment who report not having a full credential. Teachers may report more than one assignment.

[26] California *Department* of Education (CDE), Educational Demographics Unit. (2000d). *Professional assignment information form, 1999-2000*. Sacramento, CA: Author.

California Department of Education (CDE), Educational Demographics Unit. (1999c). *Professional assignment information form, 1998-99*. Sacramento, CA: Author.

California Department of Education (CDE), Educational Demographics Unit. (1998b). *Professional assignment information form, 1997-98*. Sacramento, CA: Author.

Note: The percentage of underprepared teachers is calculated as the percentage of full-time teachers by assignment who report not having a full credential. Teachers may report more than one assignment.

[27] Our estimates of the supply of credentialed teachers assume the average participation rates of newly credentialed teachers over the past 3 years, the highest they have been through the 1990s. Specifically,

we assume that *approximately* 81% of newly credentialed teachers take a teaching job within 1 year of receiving the credential, another 2.1% enter 1 to 2 years after, and 0.5% begin teaching 2 or more years after receiving a preliminary credential. The SRI analysis of CTC credentialing and STRS contribution data showed that, on average, 55% of newly credentialed teachers began as substitutes. However, a vast majority (88%) of them converted to regular status within the same year. The participation rates given account for those who enter the teaching force as regular employees and those who convert, presumably, to other, more permanent positions. The first-time/new-type preliminary credentials recommended by IHEs are forecast to remain at their 1999-2000 levels, with the exception of growth among the independent IHEs, which is pegged at historical growth rates relative to the overall demand for teachers. The number of teachers credentialed out-of-state is assumed to be the 7-year average of 3,200. Similarly, using the average from 1993-94 through 1999-2000, we estimate reentrants to average 1% of the prior year's teaching workforce. There is no direct measure of reentrants in California. We follow the method of deriving the number of reentrants that Fetler (1997) used, by estimating annual new hires and subtracting the number of new preliminary credential recipients who took jobs and the number of new emergency permit holders and interns.

[28] Sources for raw data are those listed for all the separate supply and demand components in this chapter.

[29] Shields, P. M., Esch, C. E., Humphrey, D. C., Young, V. M., Gaston, M., & Hunt, H. (1999). *The status of the teaching profession: Research findings and policy. A report to the Teaching and California's Future Task Force*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.

Shields, P. M., Esch, C. E., Humphrey, D. C., Riehl, L. M., Tiffany-Morales, J. D., & Young, V. M. (2000). *The status of the teaching profession: 2000. An update to the Teaching and California's Future Task Force*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.

[30] California Department of Education (CDE), Educational Demographics Unit. (2001c). *Teacher credentials and experience by school.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

SRI analysis.
Note: This analysis and subsequent analyses of the distribution of underprepared teachers use data from school year 2000-01. Where possible, we compare these data with similar data from prior years, as far back as 1997-98, the first year for which they are available. The data for 2000-01 include all schools that are not adult, vocational, or other alternative schools to provide a statewide portrait of the distribution of underprepared teachers. Therefore, differences reflect changes in this state-level portrait.

[31] California Department of Education (CDE), Educational Demographics Unit. (2001c). *Teacher credentials and experience by school.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

[32] California Department of Education (CDE), Educational Demographics Unit. (2001c). *Teacher credentials and experience by school.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

Note: For consistency with previous reports, this analysis used the three-level urbanicity variable (AREA) provided in 1998 CBEDS data files retrieved on the World Wide Web in 1999. The exact Web address is not known. CDE now reports urbanicity using a seven-level variable (POP_STAT), as

follows: (1) large cities, (2) mid-size cities, (3) urban fringes of large cities, (4) urban fringes of mid-size cities, (5) large towns, (6) small town, and (7) rural. The relationship between this variable and the definition of the school-level urbanicity variable provided in CBEDS in 1998 is not known; however, the following table details how each level of AREA (three-level urbanicity variable) is distributed across POP_STAT (new seven-level variable).

Percentage of Schools, AREA by POP_STAT

	AREA		
POP_STAT	Rural	Suburban	Urban
1	1	12	50
2	16	13	16
3	27	72	34
4	22	3	1
5	2	0	0
6	12	0	0
7	21	0	0
Total	100	100	100

[33] California Department of Education (CDE), Educational Demographics Unit. (2000c). *Teacher credentials and experience by school.* Retrieved 2000 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

California Department of Education (CDE), Educational Demographics Unit. (2001c). *Teacher credentials and experience by school.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

CDE. (2000e). *1999-2000 API (growth).* Retrieved 2000 from API data files on the World Wide Web: http://www.cde.ca.gov/psaa/api/fallapi/api9900data.htm.

SRI analysis.

Note: At the time of writing the API scores for 2001 were not yet released; therefore, for this analysis, the categorization of academic performance is based on API scores from 2000.

[34] Note: In this and the subsequent paragraph, percentages given for 1997-98 are not comparable to those given in Figure 3-3 and Figure 3-4 of *The Status of the Teaching Profession* (1999), which included emergency permits but not other types of underprepared teachers.

[35] California Department of Education (CDE), Educational Demographics Unit. (1998c). *Teacher credentials and experience by school.*

California Department of Education (CDE), Educational Demographics Unit. (1999b). *Teacher credentials and experience by school.* Retrieved 2000 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

California Department of Education (CDE), Educational Demographics Unit. (2000c). *Teacher credentials and experience by school.* Retrieved 2000 from CBEDS data files on the World Wide Web:

http://www.cde.ca.gov/demographics/files/.

California Department of Education (CDE), Educational Demographics Unit. (2001c). *Teacher credentials and experience by school.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

California Department of Education (CDE), Educational Demographics Unit. (2001e). *California work opportunity and responsibility to kids.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

SRI analysis.

Note: the numbers of schools included in the analyses vary for each year because of varying completeness of the data sets. The table below provides the numbers of schools included in each category.

Number of Schools by Student Poverty Category in Distribution Analysis

Percent on free or reduced-price lunch	1997-98	1998-99	1999-2000	2000-01
0-25%	1,967	1,920	1,866	2,307
26-50%	1,711	1,611	1,592	1,712
51-75%	1,636	1,569	1,563	1,758
76-100%	1,689	1,692	1,689	1,738
Total	7,003	6,792	6,710	7,515

Keeping the number of schools in each poverty category relatively constant does not materially change the differences in average percent underprepared in each poverty category between 1999-2000 and 2000-01.

[36] California Department of Education (CDE), Educational Demographics Unit. (2001c). *Teacher credentials and experience by school.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

California Department of Education (CDE), Educational Demographics Unit. (2001f). *Enrollment by ethnic group by school.* Retrieved 2001 from CBEDS data files on the World Wide Web: http://www.cde.ca.gov/demographics/files/.

SRI analysis.

Note: The numbers of schools included in the analyses vary for each year because of varying completeness of the data sets. The table below provides the data for the numbers of schools included in each category.

Number of Schools by Student Minority Category in Distribution Analysis

Percent student minority	1997-98	1998-99	1999-2000	2000-01
0-30%	1,828	1,704	1,866	1,744
31-60%	1,874	1,751	1,592	1,981
61-90%	2,007	1,945	1,563	2,232
91-100%	1,322	1,347	1,689	1,566
Total	7,031	6,747	6,710	7,523

Keeping the number of schools in each minority category relatively constant does not materially change the differences in average percentage of underprepared teachers in each minority category between 1999-2000 and 2000-01.

3. Teacher Preparation in California

Policy Initiatives in Teacher Preparation

- The California State University System, the University of California, and the independent sector have all made efforts to increase the production of teacher candidates.
- The CSU system has committed itself to increase access to its preparation programs by making programs more flexible and responsive to the needs of their students.
- State policy-makers have invested heavily in expanding programs to support individuals already teaching without a full credential, especially the Intern and Pre-intern programs.

Impact of Policy Initiatives

- The production of new preliminary and professional clear credentials continued to increase through 1999-2000, although the rate of increase flattened out.
- In contrast, the production of intern credentials has continued to rise sharply, accounting for more than half of the increase in new credentials issued in the past 2 years.
- CSU has regained its market share in the production of new credentials.
- Institutions of higher education have created numerous programs, often in cooperation with local districts, to improve the opportunities for individuals interested in becoming teachers and to meet the need of individuals already working as the teacher of record.

Characteristics and Quality of Teacher Preparation

- The availability of jobs and Intern and Pre-intern programs has weakened the incentives to earn a credential prior to employment. One result is that the number of classroom teachers without full credentials enrolled in teacher preparation programs is increasing.
- The increasing numbers of teachers of record in teacher preparation programs have altered both the focus and the structure of teacher preparation at many institutions in the state.
- In some parts of the state, the shortage of fully credentialed teachers has blurred the lines between new teachers' preparation, induction, and professional development and altered traditional institutional responsibilities.
- Teachers who teach before being fully credentialed are less likely to have student teaching with daily feedback from their supervising teacher or to have early classroom experiences than teachers taking the traditional route.
- The majority of district administrators, principals, and teachers reported that new teachers were adequately prepared, regardless of their route into the profession. However, only a minority reported that new teachers were well prepared.
- Principals reported that interns were less well prepared than fully credentialed recent hires in terms of their subject matter knowledge, their knowledge of instructional and assessment techniques, and their ability to teach basic skills to a diverse student population.

The severe shortage of credentialed teachers willing to take jobs in the state's hard-to-staff schools has created a crisis of its own for the system of teacher preparation. Teacher education faculty are increasingly preparing students who are already teaching. The incentive for prospective teachers to earn a credential before becoming a teacher has dissolved in many districts across the state. The collapse of the incentive system has turned teacher preparation on its head at many colleges and universities. Increasingly, teacher preparation programs get their students from the pool of teachers working in neighboring school districts who are not fully credentialed, rather than neighboring school districts getting their teachers from teacher preparation programs.

Concurrent with concerns about the number of credentials produced, a closer scrutiny of the quality of teacher preparation programs has arisen. The federal government, through the Higher Education Act of 1998, signaled its intent to improve teacher preparation through strict accountability measures and public disclosure of teacher test results. At the state level, policy-makers are poised to launch a redesigned teacher licensing system, with performance assessments and mandatory completion of a formal induction program.

In response, numerous constructive efforts have been made in both the public and private sectors to increase the flexibility of preparation programs and to increase the overall production of credential candidates. The full impact of these efforts is yet to be felt, but it is safe to say that the state's system of teacher preparation is undergoing rapid change. In this process, tomorrow's teachers are following multiple routes into the profession. For those seeking jobs in suburban areas and in high-achieving schools, candidates typically complete a formal teacher preparation program, including student teaching, and then enter the classroom. In the inner cities and in remote rural areas, where students are most likely to be struggling, candidates study to become a teacher while they are teaching.

In this chapter, we examine the system of teacher preparation in California as it undergoes dramatic shifts in the roles and responsibilities of universities, school districts, and individual schools. First, we describe policy-makers' responses to issues of the quantity and quality of California teachers. Next, we examine the recent trends in the production of new teachers. We then examine the changing structure of teacher preparation programs and review the data on the quality of programs. Here, we review statewide survey data of teachers, principals, and district officials, and compare the results with case study data. We also look more closely at recent efforts to address teacher quality issues, including the development of blended, intern, and pre-intern programs. Finally, we explore the future of teacher preparation in California and discuss policy options.

Policy Response

State policy-makers and the teacher education community have been increasingly active in seeking ways to meet the challenge to produce more and better teachers. These have included efforts to expand programs to increase the number of teacher candidates, to create more flexibility within traditional programs, to streamline procedures to lower the barriers to completing credential programs, and most markedly to create alternative routes into the profession.

Increasing the Number of Teacher Candidates

In terms of increasing the production of new teachers, each sector of the teacher preparation system has committed itself to turning out larger numbers of teacher candidates. A few institutions in the independent sector led this production increase throughout the early and mid 1990s. In 1998, the California State University System's Board of Trustees committed itself to increase the number of credential candidates by 25%.[1] In 1998-99, state policy-makers supported this effort by earmarking $18 million to increase the production of new teachers by the CSU system. The UC system also has committed to increasing its student enrollment in teacher preparation programs.

Facilitating Entrance into the Teaching Profession

A second policy response was to make it easier for prospective teachers to get through traditional teacher education programs. In response to criticism that its programs were too rigid and that access to the right classes was difficult, the CSU Presidents Commission on Teacher Preparation and K-18 Education adopted *CSU's Commitment to Prepare High Quality Teachers,* which included the core goal of increasing access for all students to the classes they needed to finish a teacher preparation program.[2] The goal was to make CSU as "user-friendly" as the rapidly growing independent programs by offering classes in the evening, on weekends, and during the summer. Again state policy-makers stepped in to assist with the effort, providing CSU with $2.2 million to expand teacher preparation summer term programs.

Another line of reforms was directed at strengthening the connections between the 1.4-million-student community college system and the teacher preparation system. The goal was to make sure that students interested in teaching could get relevant course work in the community colleges and would be able to transfer into the CSU system, in particular, with the proper preparation to continue to pursue a teaching degree. The 1999-2000 California state budget included $10 million for Community College Teacher and Reading Development Partnerships. In 2000, the CSU system signed a formal memorandum of understanding with the California Community College System aimed at expanding the "pre-preparation" experience of community college students.

Recognizing that the largest barrier to completing a credential program—before going on to teach—is the financial cost of studying and not working, the Governor initiated the Governor's Teaching Fellowships. The program offered 250 fellowships worth $20,000 each to promising teacher candidates who commit to working in hard-to-staff schools. The program expanded to 1,000 fellowships in 2001-02, with a $17.5-million budget.

Creating Alternative Routes into the Profession

The biggest policy response, in terms of both dollars and impact, has been the creation and expansion of alternative routes into the profession. These include the blended programs that accelerate undergraduates' entry into teaching and internships that support classroom teachers of record who have not yet received preliminary or professional clear credentials. In addition, the state created the pre-intern program, which prepares teachers to enter intern programs.

In blended teacher education programs, prospective teachers earn an undergraduate degree and a teaching credential in 4 years, combining—"blending"—the 4 years of undergraduate education with the 5th year of teacher preparation. Blended programs originally were recommended by the SB 1422 Advisory Panel and expanded in 1998 by a provision of SB 2042. The programs are designed to accelerate the preparation of teachers and move them into the classroom sooner. At the same time, they are meant to strengthen the teacher preparation experience. The purposeful blending of opportunities to learn content and the skills needed to teach that content, early and regular field experiences through which students are able to understand the demands of the profession, and structured opportunities to reflect on those experiences are all meant to prepare stronger teacher candidates.[3] Blended programs, especially on the CSU campuses, have been expanding rapidly, increasing from 437 students to more than 1,200 in the past 3 years, although this still represents a small proportion of all credential candidates.

A series of laws, beginning with the Teacher Education Act of 1967 and culminating with the Alternative Teacher Certification Act of 1993, established the requirements for internship programs in an attempt to expand the pool of qualified teachers. Participants in intern programs have a bachelor's degree and have passed subject matter competency requirements. While working as the teacher of record, interns are enrolled in a planned course of study and receive support from mentor teachers and/or IHE faculty.

Pre-intern programs are of more recent vintage. The Pre-intern Teaching Program was enacted in 1997, and, according to the legislation, targets not fully credentialed teachers to provide them with "early, focused, and intensive preparation in the subject matter that they are assigned to teach and development in classroom management, pupil discipline, and basic instruction methodologies." Pre-interns are full-time teachers who do not have a preliminary or professional clear credential in the area they are teaching and who have not met subject matter requirements through their coursework or by passing a test.

As we detail in the next section, funding for internship and pre-internship programs has increased dramatically—to $22.8 million in 1999-2000 from only $2 million in 1996-97. Participation in the two programs has increased, as well.

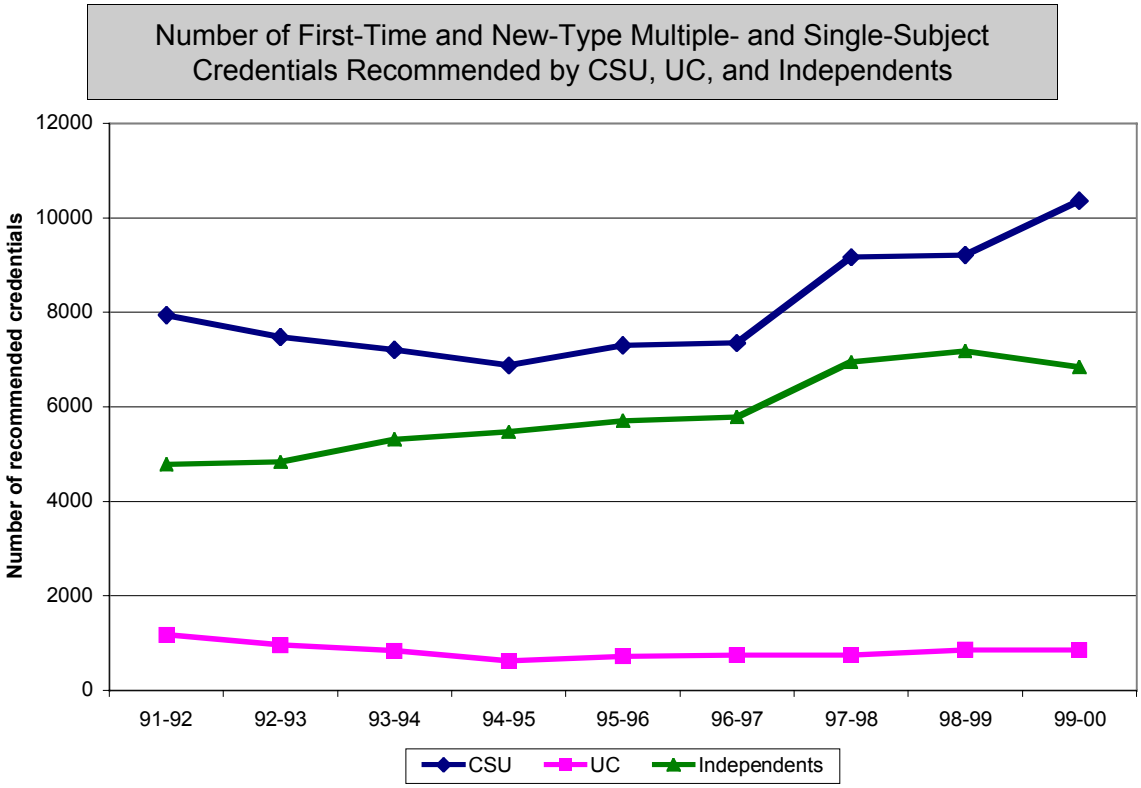
The Impact of Policies on the Number of Teacher Candidates

All of these policies, whether targeted directly to increase production, streamline the production process, or create alternative routes, are meant to increase the number of teacher candidates ready to take jobs in the state's classrooms. Have they succeeded in doing so? We know from the preceding chapter that the supply of fully credentialed teachers willing to take jobs is still short of the demand. At the same time, these

policies have had some impact on increasing that supply: the number of credentials issued by CTC has risen steadily.

Figure 3-1 illustrates the past decade's credential production trends—that is, the number of first-time and new-type multiple- and single-subject credentials recommended to CTC. The figure shows the number of credentials recommended by the CSU system, the UC system, and the independent sector. During the first half of the 1990s, the independent sector increased its production of credentialed teachers, at a time when the public sector's production decreased. More recently, CSU programs have regained their market share through the system's various efforts to increase the number of teacher candidates. From 1994-95 through 1999-2000, CSU increased its production from 6,877 to 10,359 newly credentialed teachers, a 50% increase.[4] Although the UC system had not greatly increased its production of credentialed teachers by 1999-2000, over the past two years (2000-01 and 2001-02), enrollment in teacher preparation programs in the UC system has increased by 8.5%.[5]

Figure 3-1



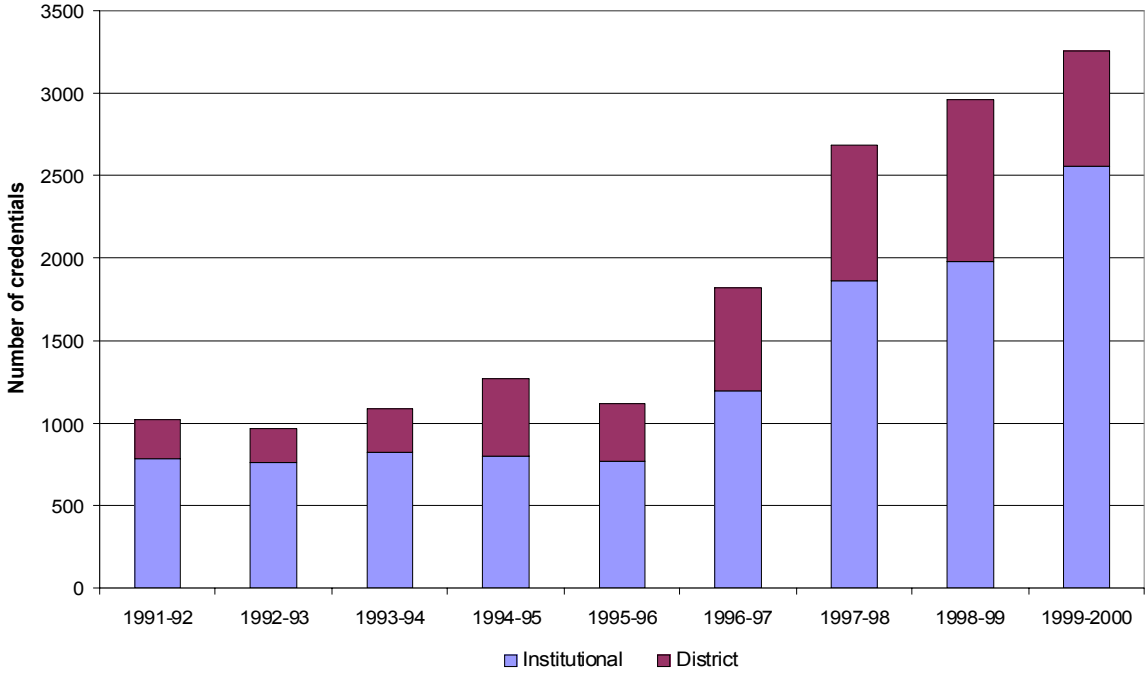
Sources: CTC (1998, 1999, 2000).[6]

As we noted in the preceding chapter, more than half of the increase in credentials recommended from 1997-98 through 1999-2000 was in the number of intern credentials awarded to individuals already in the classroom. What these numbers show is that recent policy initiatives have had only a minimal impact on the production of traditionally prepared teachers—individuals who go through a preparation program, earn a preliminary credential, and then begin to teach. Rather, the primary impact of these policies has been the creation of teacher preparation programs for individuals already in the classroom without full credentials.

Figure 3-2 presents the increase in the number of intern credentials. Both IHEs and school districts offer internship programs, but they are found mainly on CSU campuses and in some large school districts. As of 2001-02, there are 81 intern programs, all but 8 of which are led by IHEs.

Figure 3-2

First-Time and New-Type Multiple-Subject, Single-Subject, and Education Specialist Institutional and District Intern Credentials, 1991-92 to 1999-2000



Sources: CTC (1998, 2000, 2001).[7]

Note: Institutional intern credentials included in Figure 2-2, First-Time and New-Type Multiple- and Single-Subject Preliminary, Professional Clear, and Intern Credentials Recommended by IHEs, 1991-92 to 1999-2000, do not include education specialist credentials, whereas this figure does include them.

Table 3-1 shows the growth of the intern program from 1991 through 2000. Over the past 7 years, the number of intern programs has nearly tripled, and the number of participants has increased about six-fold. Note that the number of participants in intern programs—5,649 for 2000-01—is higher than the number of credentials issued, both because it typically takes more than a year to finish the program and because these programs sometimes serve individuals without formal intern credentials.

Table 3-1

Growth of the Internship Program

Fiscal Year	Number of Funded Programs	Number of Interns Served	Number of Districts Involved	Funding (Millions)
1994-95	29	1,238	150	$2.0
1995-96	23	1,471	178	$2.0
1996-97	23	1,888	186	$2.0
1997-98	52	3,706	271	$4.5
1998-99	58	4,340	330	$6.5
1999-2000	65	4,827	408	$11.0
2000-01	75	5,649	465	$21.5
2001-02	81	7,236	594	$31.8

Source: CTC (2001).[8]

The increase in the intern program has been exceeded in recent years by the growth in the pre-intern program (Table 3-2). The program has grown from 955 participants in its first year of operation, 1998-99, to more than 10,000 participants in 2001-02. These programs are targeted at teachers who have not yet met subject matter requirements and so are not eligible for internship programs.

Table 3-2

Growth of the Pre-Intern Program

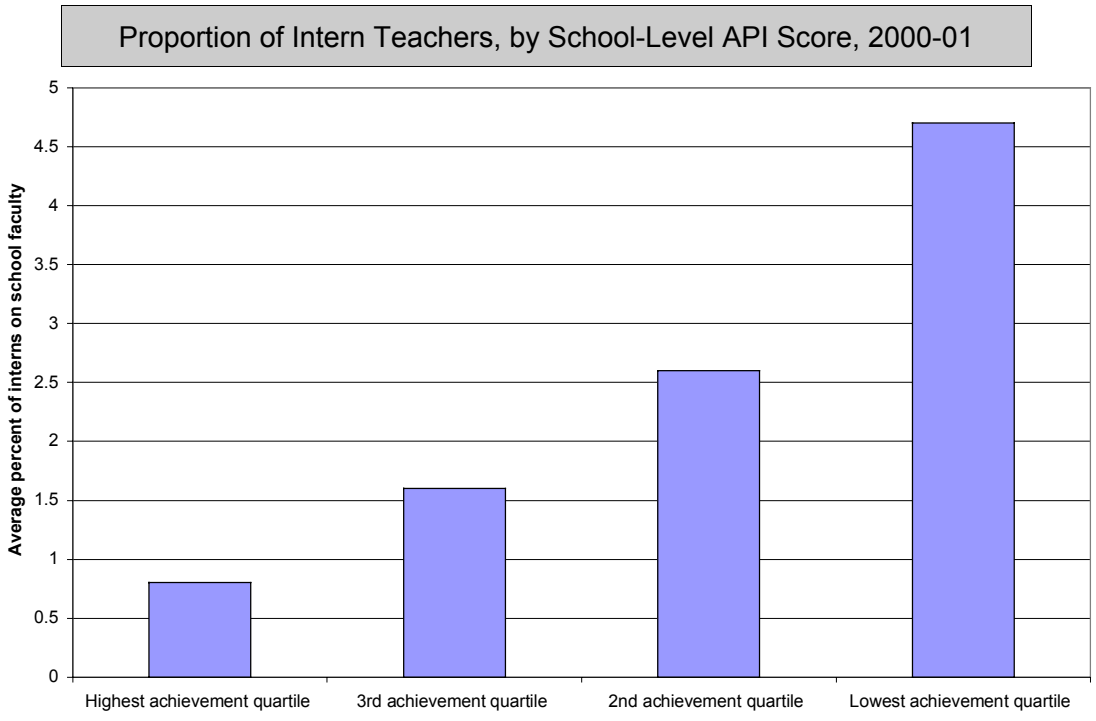
Fiscal Year	Number of Funded Programs	Number of Pre-interns Served	Number of Districts Involved	Funding (Millions)
1998-99	18	955	41	$2.0
1999-2000	43	5,800	316	$11.8
2000-01	59	7,694	330	$11.8
2001-02	69	10,534	410	$11.8

Source: CTC (2001).[9]

These trends—lack of growth in traditionally prepared teachers and rapid growth in teachers prepared through alternative routes — can be interpreted from two perspectives. On the positive side, many more individuals committed to the teaching profession are getting structured assistance—individuals who otherwise might be teaching on emergency permits with no formal help. In 1997-98, only 1 in every 10 underprepared teachers—teachers without full credentials in the subject areas they were teaching—were receiving support from a formal program; by 2000-01, that percentage had grown to nearly one-third (or about 13,000 interns and pre-interns out of approximately 42,000 underprepared teachers).[10]

At the same time, these trends show that in recent years we have made little progress in increasing the percentage of teachers with full credentials in the state's classrooms. Moreover, it is likely that the increased availability of these programs has decreased the incentive for individuals to complete a teacher preparation program before entering the classroom. Here it is reasonable to discuss the intern and pre-intern programs separately. The pre-intern program can be seen as a short-term policy response to a serious problem—provide some support for teachers who otherwise would be on their own—while the system fixes the larger problem of the imbalance of supply and demand. Unfortunately, the temporary solution is expanding and becoming institutionalized. In contrast, the internship program has a long history in the state and is seen by some as a legitimate alternative route into teaching. Internships in general are supported as effective because they bring individuals with subject matter competence into the classroom without making them pass through the bureaucratic hurdles of the credentialing system.[11] Yet, we are still struck by the fact that interns are so much more likely to be working with poor, urban, and/or low-achieving students. If this route is equal to the traditional path into teaching, why are the lowest-achieving students nearly 6 times as likely as high-achieving students to be taught by an intern (Figure 3-3)?

Figure 3-3



Source: CDE (2001).[12]

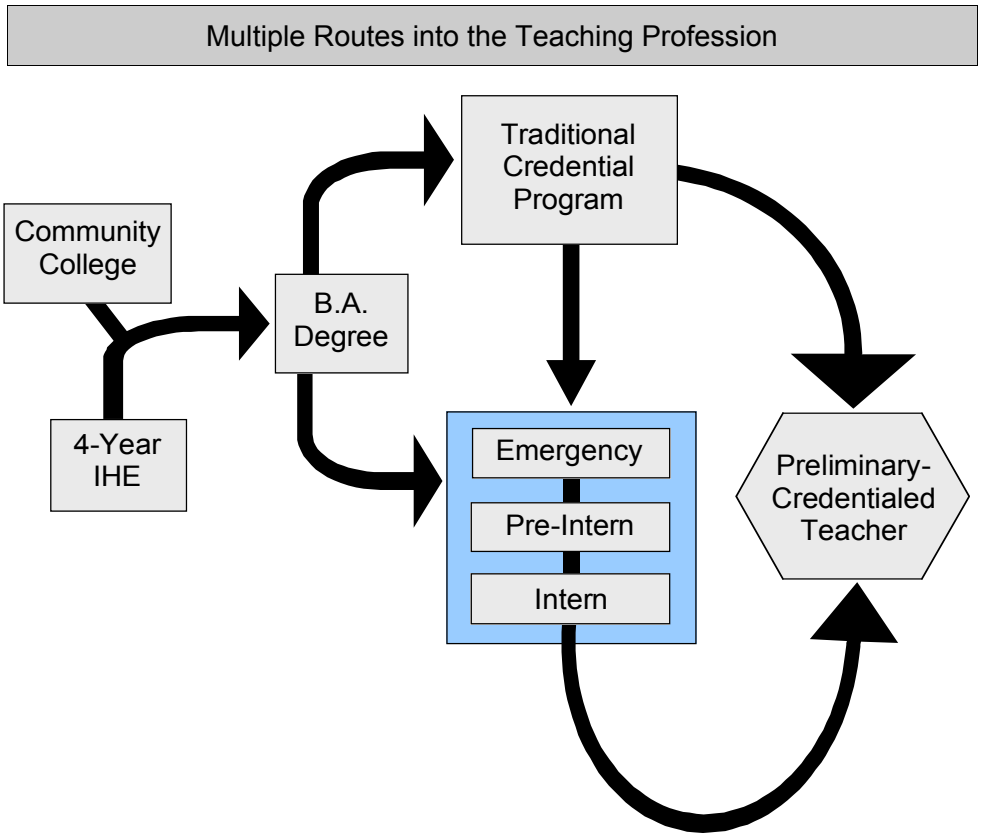
The growth of these alternative programs, the growth in the overall number of teachers who have not yet completed a credential, and the limited growth in the number of traditionally prepared credential candidates in combination have also had an impact on the system of teacher education in the state, to which we turn next.

Impact of Multiple Routes into the Profession on the System of Teacher Preparation

The proliferation of multiple routes into the teaching profession has meant that teacher preparation programs have had to adapt to a changing student body and develop or adapt programs to meet students' needs. The biggest challenge, of course, is meeting the needs of the growing number of students in teacher preparation programs who are already the teacher of record in a public school classroom.

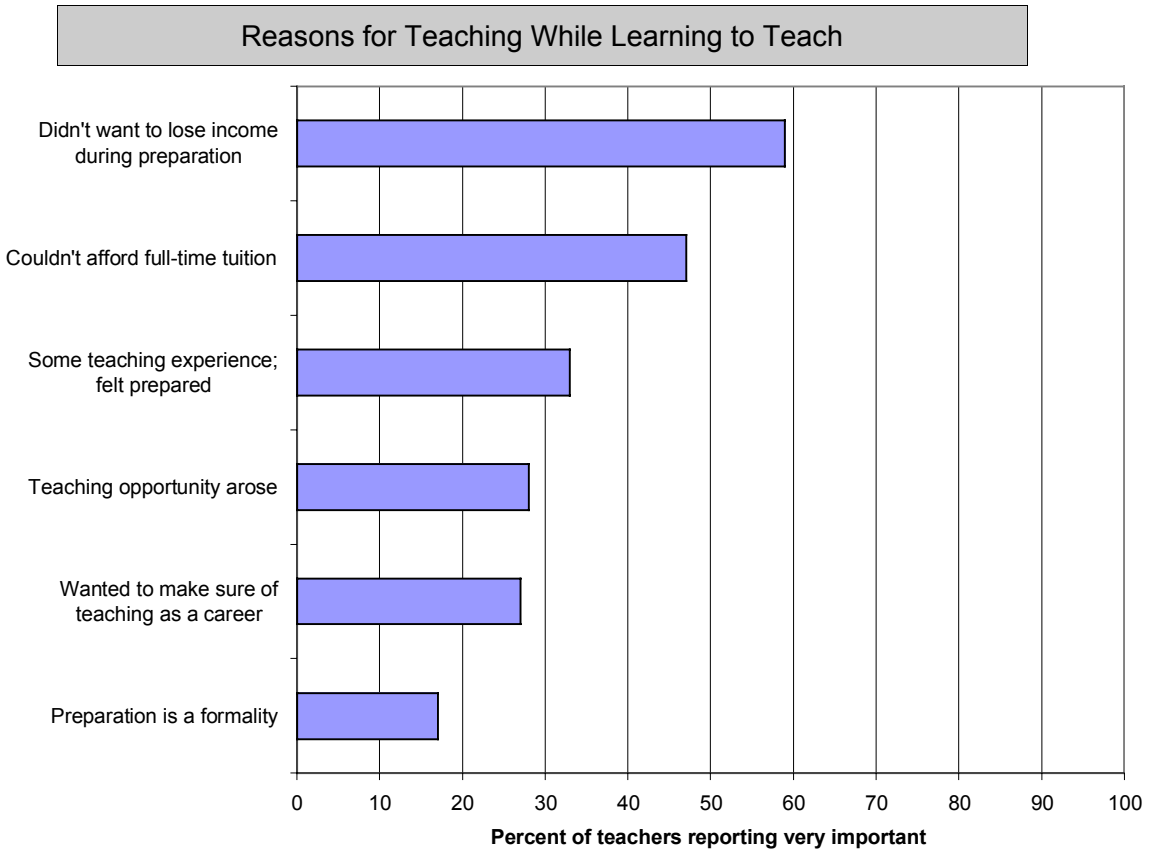
Figure 3-4 provides a simple schema to map the different routes that credential candidates pursue on their way to becoming a teacher. About half of new teachers take the traditional route: preparation, coursework, supervised clinical experience, credential receipt, and then teaching. Another half begin teaching before completing a preparation program. It would be a mistake, however, to think of credential candidates as falling into two discrete categories: those already teaching and those who have not begun to teach. Nor do these credential candidates fall neatly into programmatic routes: traditional, intern, pre-intern, or emergency. We know from our case studies, surveys, and analyses of secondary databases that credential candidates often jump from one route to the next, from one program to the next. For example, it is not uncommon for individuals to enter a preparation program, complete the bulk of their coursework, and then—often during student teaching—to accept a job offer, requiring them to obtain an emergency permit. In fact, 35% of the emergency permit holders in our statewide survey began (but did not complete) their preparation programs before taking a job. Other candidates may begin teaching on an emergency permit and then enroll in a more structured intern program. We interviewed one teacher who had worked on an emergency permit for 2 years, enrolled in a pre-intern program for assistance in gaining subject matter competency, and was currently in an intern program.

Figure 3-4



Regardless of the route—or the multiple routes—that individuals take, they are faced with the opportunity cost of remaining in a traditional program and completing student teaching. That is, if an individual chooses to begin teaching before beginning a preparation program or chooses to exit a program before completion, it is typically for financial reasons. When we asked teachers who had begun teaching before receiving a preliminary credential why they had done so, they reported that they did not want to sacrifice the income they could gain from working or that they were struggling to cover the cost of the preparation program (Figure 3-5). Only a minority of these teachers thought that preparation did not matter. From interviews with teachers, we know that completing student teaching was especially problematic: although they could complete coursework in the evenings while working during the day outside the field of education, they needed to be available during school hours for student teaching. Not being able to afford the loss of income and with classroom teaching jobs readily available, they chose to start teaching before completing their credential program.

Figure 3-5



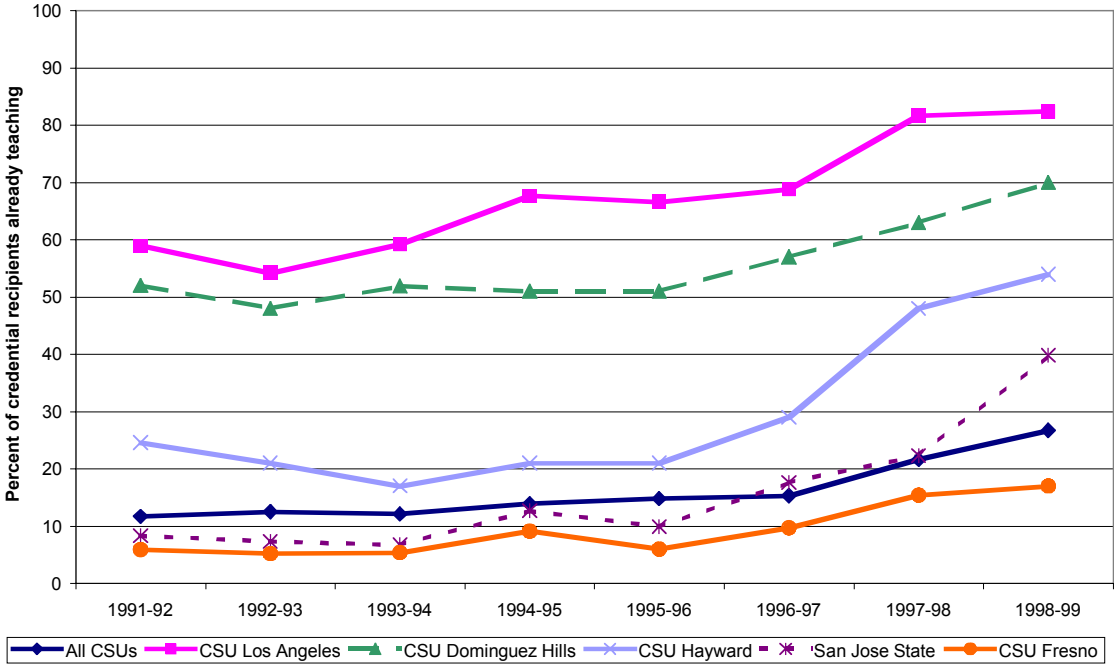
Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Of course, leaving—or not starting—a teacher preparation program in order to take a job as a teacher of record is more prevalent in communities that have more severe teacher shortages. Consequently, some teacher preparation campuses have much higher proportions of their students already teaching than other campuses do. However, after class-size reduction, all campuses had increases in the number of practicing teachers in their credential programs.

Longitudinal statewide data describing these patterns are limited. We were able to track the credential history of those who completed a teacher preparation program and earned a preliminary credential by merging different databases from 1991 through 1998. Figure 3-6 shows, for a selected set of CSU campuses, the proportion of teachers who began teaching as the teacher of record before earning a preliminary credential. It demonstrates both the disparities across campuses and the general pattern of increase in the proportion of teachers of record in teacher preparation programs. In the programs serving communities in the LA Basin with severe teacher shortages, the percentage of teachers of record increased to comprise the vast majority of their students. In less heavily affected communities, the overall percentages remained lower, although rising as well.

Figure 3-6

Percentage of Credential Recipients from Selected CSU Campuses Who Are Already the Teacher of Record



Sources: CTC (2000); STRS (2000); SRI analysis.[13]

These data underrepresent the number of teachers of record in preparation programs because they do not account for teachers of record who attend classes in a preparation program but never earn a preliminary credential.

Structural Shifts in Teacher Preparation Programs

So what has been the impact of the increasing number of teachers of record in teacher preparation programs? The first major impact has been the proliferation of new programs designed to meet the needs of their students who are already teaching. The second impact has been a concerted effort across campuses to make programs more flexible and responsive. Third, and quite importantly, teacher education programs are struggling to provide high-quality clinical experiences for their students who are already teaching. Taken together, these shifts are redefining teacher preparation programs and redefining their relationships with districts and schools.

The Creation of New Programs. Teacher education programs have always consisted of numerous smaller programs designed to prepare teachers for different roles in the K-12 system—as bilingual teachers, special education teachers, secondary science teachers, etc. With the influx of so many students already teaching in K-12

classrooms, teacher education programs have created a new set of programs. These include the intern and pre-intern programs we already described, of which there are now more than 150. Beyond these targeted state-funded programs, IHEs have sought other ways to connect their work more closely with surrounding schools and districts, where their students are already teaching. In some cases, these efforts have led to innovative partnerships.

The Accelerated Collaborative Teacher (ACT) Preparation Program

The Accelerated Collaborative Teacher (ACT) Preparation Program was developed out of a concern that schools in the Los Angeles area were increasingly hiring emergency permit teachers who had little or no preparation. ACT is designed to accelerate the credential process through a 1-year, full-time graduate program for multiple-subject, single-subject, and special education teacher candidates. In addition, the ACT Program is an attempt to redesign teacher education as a shared responsibility of schools and universities.

With the goal of creating a pool of well-qualified teachers for the Los Angeles Unified School District and other districts facing severe teacher shortages, best practices in teacher education influenced the design of ACT. The program features personalized advisement and mentoring and progression through the program as a cohort of teacher candidates. Courses are offered at the Professional Development Center at Francis Polytechnic High School and at the California State University at Northridge. The program emphasizes field-based experiences with diverse learners in an effort to closely link theory to practice. All courses are collaboratively planned and taught by a cadre of university faculty and accomplished teachers. Teacher candidates do serve as the teacher of record. However, they spend much of their time in classrooms under the close supervision of experienced teachers who have been trained as coaches.

After the first 2 years of the program, 95% of teacher candidates were retained in the program, and 90% completed all program requirements within a year. The vast majority of ACT graduates (84%) reported that they considered themselves well prepared as a beginning teacher.

Other programs are trying to address the needs of underprepared teachers through the use of technology. For example, the CSU system has created a cross-campus distant learning program—CalStateTEACH—that provides support to individuals without preliminary credentials teaching in schools who do not have easy access to campus-based programs. About 400 teachers enrolled in the program in 1999-2000, and more than 800 enrolled in 2000-01.

Increased Flexibility in Existing Programs. At the same time that campuses have created new programs, they have sought to provide greater flexibility in their existing programs. From our case study data, we know that most CSU programs have made changes in the structure, curriculum, and sequence of courses. CSU programs increasingly offer classes at night and on weekends to accommodate the schedules of working teachers. At some campuses, there are virtually no teacher preparation

students present during the day. In addition, some CSU programs offer classes off campus to make them more convenient for working teachers.

The increasing number of students who are already teachers has pushed faculty to make more fundamental shifts in their programs, as well. For example, in some programs, courses on classroom management have been moved to the beginning of the program instead of toward the end. Some CSU faculty reported that they had adjusted course requirements to reduce the burden on overburdened individuals who were already teaching. Faculty also reported that their students who were working teachers were often too tired to participate in class and too hard pressed to complete assignments. Summing up these different issues, one faculty member stated:

> Emergency credential teachers want a lot of validation for what they are doing. They come in with ideas about what ought to happen in the classroom. … What they want is quiet. They ask me, "What do I do to keep them [students] under control?" I ask them how are they creating a learning environment, and they ask, "How do I keep them quiet?"

The magnitude of the changes in the structure and focus of preparation programs varies from one campus to the next. However, teacher preparation programs serving large numbers of underprepared teachers have dramatically changed. As one traditional teacher candidate told us, "The classes are so geared toward people who are teaching that the people who are not teaching are at a disadvantage."

Credential candidates' reports on the effectiveness of teacher preparation programs' efforts to meet their needs are mixed. In interviews, many teacher candidates focused on the overall challenge of balancing coursework with the other parts of their lives. Nearly all intern credential, pre-intern certificate, and emergency permit teachers we interviewed complained about exhaustion as a result of trying to teach and take classes at the same time. Many candidates complained about the limited availability of required courses, the number and cost of tests, and the lack of clarity about credential requirements. At the same time, many candidates appreciated the availability of programs to support them. As one intern put it:

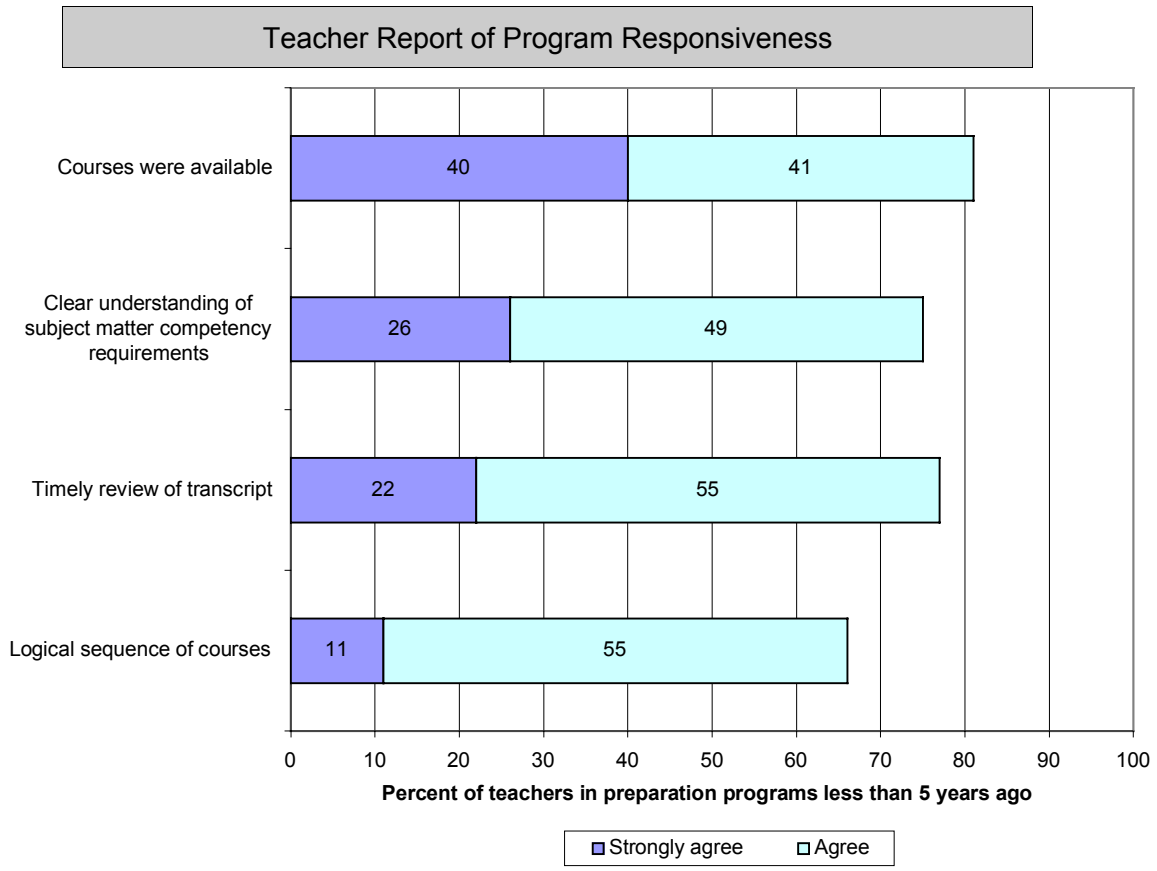
> It's really hard working all day and then going to class at night and on the weekend. Some days I don't know if I can keep going. I could never do this if I had kids. But I do like going and being with the other interns—we share ideas about how to do a better job with our students. It's nice to have someone to talk to.

Responses to our statewide teacher survey reflect this mixed pattern (Figure 3-7). Few teachers strongly agreed that they were able to take a logical sequence of courses (11%), had a timely review of their transcript (22%), and knew about subject matter competency requirements (26%). Yet, in each case, the majority of teachers at least agreed with the statements. The fact that higher scores were given to the availability of classes may reflect the work programs have done to provide courses in the evening and on weekends. The lower ratings for having access to a logical sequence suggest that teacher candidates are still having difficulty putting courses together in a reasonable way—at least given the other demands on their time.

Importantly, there were only modest differences in the perceptions of program responsiveness between teachers who completed a credential before teaching and those who taught first. These findings suggest that teacher preparation programs are making efforts to accommodate the needs of nontraditional-route teachers. The one exception

was that among teachers who completed their credential program 5 or fewer years ago, 94% of traditional-route teachers agreed or strongly agreed that courses were available to them when they were ready to take them, whereas this was true for 71% of nontraditional-route teachers.[14]

Figure 3-7



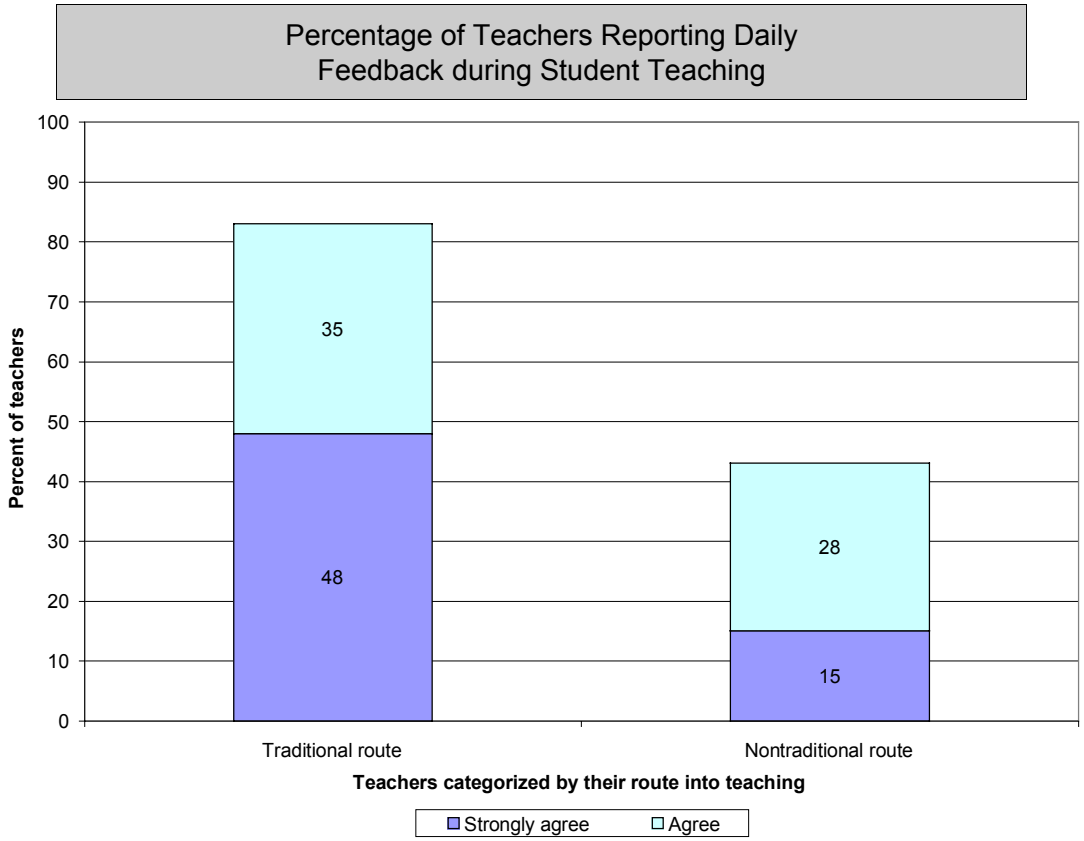
Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

The Decline of Student Teaching. Beyond preparation program logistics, the learning opportunities for teacher candidates differ between those who complete a program before beginning to teach—the traditional route—and those who begin to teach before they complete (or even begin) a preparation program—the nontraditional route. Because nontraditional-route teachers often have not yet attained subject matter competency, they were more likely to receive formal test preparation as part of their preparation than traditional-route teachers (49% to 30%). More importantly, nontraditional-route teachers face a simple dilemma: because they work full-time during the day as a teacher of record, they do not have time to observe or work in a master teacher's classroom. Thus, teachers who pursue the nontraditional route are even less likely than traditional-route teachers to have field experiences in the first quarter or semester of their preparation (75%, compared with 91%). But the most striking difference in the structure of their preparation programs was that nontraditional-route teachers were far less likely than traditional-route teachers to have completed all of their student teaching experience in the classroom of a master teacher (77%, compared with 99%).[15]

More than half (53%) of the teachers surveyed with less than 5 years of experience reported that they did some or all of their student teaching while working as the teacher of record in their own classroom. The problem is that a teacher in his or own classroom cannot get the kind of support, modeling, and assistance that a teacher working with a more experienced master teacher can. The research on student teaching suggests that it is the most useful part of teacher preparation. Although the quality of the student teaching experience varies, researchers have generally agreed that the role and importance of student teaching should be increased.[16] Despite the variation in quality, the conventional wisdom among practitioners is that student teaching is a prerequisite to effective teaching. As one principal of an inner-city school reported, "I would like to see applicants who have completed their student teaching because I think overall they are more successful when they move into the classroom."

The faculty of teacher preparation programs are understandably reluctant to allow underprepared teachers to complete all of their student teaching in their own classrooms. Consequently, programs seek to find ways to provide at least some clinical experience in the classroom of a fully credentialed teacher. This typically occurs during the summer or when the teacher is between tracks of year-round schools. Although we do not know what portion of nontraditionally prepared teachers got at least some student teaching experience in another teacher's classroom, it is clear that they received far less supervision and daily feedback from an experienced teacher than traditional-route teachers did. Figure 3-8 shows the discrepancy between the daily feedback from a supervising teacher received by traditional-route and nontraditional-route teachers.

Figure 3-8



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Our interviews with teachers and teacher educators also revealed several additional issues related to providing all teachers with sufficient clinical experience. First, teacher preparation programs are finding it increasingly difficult to find accomplished teachers willing and able to take on student teachers in schools with high numbers of teachers who are not fully credentialed. We will discuss the shortage of accomplished teachers in greater detail later in the report. Suffice it to say that there is a greater need for accomplished teachers to take support and mentoring roles than there are accomplished teachers, particularly in hard-to-staff schools. Second, teacher preparation programs are finding it increasingly difficult to find and retain student teaching supervisors. University student teaching supervisors suffer from low prestige within the institution and increasing demands on their jobs as they try to support often overwhelmed credential candidates in their own classrooms. Some universities are attempting to improve the lot of their student teaching supervisors, but it is clear that their jobs are getting more difficult in areas where there are teacher shortages.

In summary, teacher education programs—especially those that have large numbers of practicing teachers—are undergoing some fundamental changes. Some of these can be seen positively as programs become more responsive to the needs of their clients and take steps to develop new programs and new relationships with districts and schools. Yet it is clear that providing a first-class education to individuals who are

already teaching presents quite a challenge. In particular, teacher education faculty are struck by the fact that their students who are already teaching are spending much more time "learning to teach" in their own classrooms and through informal interaction with other teachers in their schools than they are spending in preparation programs. In many cases, credential candidates are spending 40 hours or more a week in their schools and 3 or 4 hours at the local teacher preparation program. For some faculty, this situation raises the question of how much influence they can have over the development of pedagogical foundations of these teachers.

The Quality of Teacher Preparation in California

We turn now to the issue of quality. As teacher education programs across the state have expanded and developed new models for a diverse set of candidates, are they producing high-quality teacher candidates? The issue of quality is of paramount importance. The introduction of high standards and greater accountability for student learning makes it imperative that the state produce strong teachers. Concurrently, the need to produce more teachers more quickly raises questions about the capacity of institutions to maintain high quality standards.

Determining the quality of new teachers and the system of teacher preparation in California is an ambitious task. One approach is to look at the characteristics of programs that research suggests are related to the production of strong teachers. Our previous discussion on the nature and extent of clinical experience follows this approach, and that analysis suggests that the preparation of some teachers is lacking the important element of supervised student teaching. But those measures of teacher quality most clearly tied to student learning — in particular, subject matter competency and pedagogical skills — cannot be assessed by understanding program characteristics.[17] Consequently, we took the tack of asking teachers, the principals who supervise teachers, and the administrators who hire those teachers about their perceptions of the quality of their preparation for the task of teaching students in their particular schools.

The results are mixed. In the case studies, teachers and principals consistently underscored the need to learn the profession on the job—in the classroom. From their perspective, teacher preparation programs did not prepare an individual to walk into the classroom and begin teaching. In some cases, teachers characterized their preparation as a formal series of hoops to jump through that left them unprepared for the realities of classroom teaching. In other cases, teachers had more positive perceptions of their programs. However, regardless of teachers' perceptions of their programs, they did not believe that a preparation program alone *could* prepare an individual adequately. In fact, those with more positive perceptions of their programs pointed to the advantages of spending significant amounts of time in schools observing master teachers, conducting lessons, and getting feedback.

Principals followed a similar logic. They did not expect that candidates would emerge from teacher preparation programs as fully accomplished teachers. More than one principal argued that a typical preparation program was limited in time and intensity. As one principal put it, "What would you expect from a 1-year program?" Moreover, principals were able to point to individuals who were excellent teachers regardless of their preparation history. Consequently, principals saw it as a large part of their job to help train new teachers. Accordingly, principals hired new teachers on the basis of their commitment to children, their willingness to work hard, and their

openness to new ideas and practices—in short, the new teachers' potential to become good teachers.

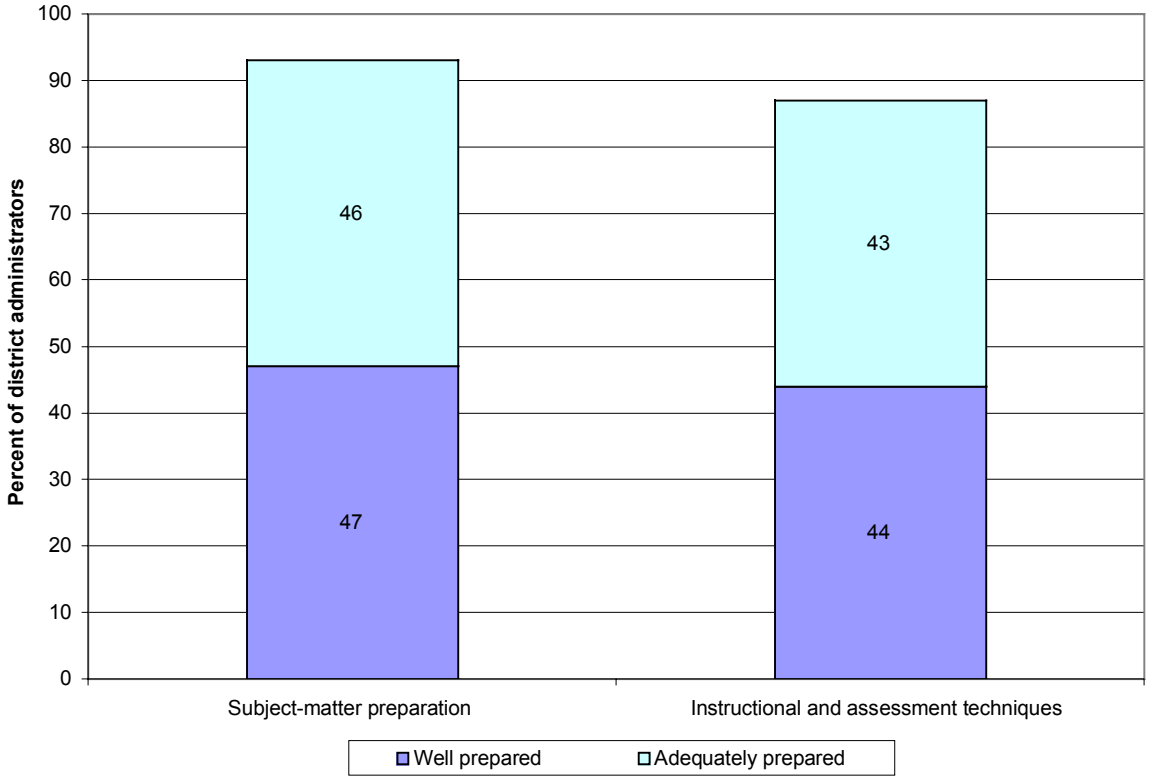
District Officials' and Principals' Reports on New Teacher Quality

The district officials charged with hiring teachers generally thought that the teachers they brought into the district were qualified to teach. In some of the larger districts we visited, district administrators had to work extremely hard to fill all of their positions and were quite happy to find people willing to take on the challenge of teaching whether they had a preliminary credential or not. In smaller suburban districts, district administrators had much greater choice in hiring teachers and were convinced that they were getting bright, capable people. In both types of districts, administrators reported that they were happy with the teachers they had hired, given their particular circumstances.

Consistent with the case study data, in the statewide survey of district hiring administrators, the vast majority of district administrators reported that the teachers they had hired in the past 3 years were at least adequately prepared in terms of subject matter preparation and knowledge of instructional and assessment techniques (Figure 3-9). Fewer than half of the administrators rated their recently hired teachers (past 3 years) as well prepared in these areas. Interestingly, there were no significant differences across different kinds of districts (district size; percentage of underprepared teachers).

Figure 3-9

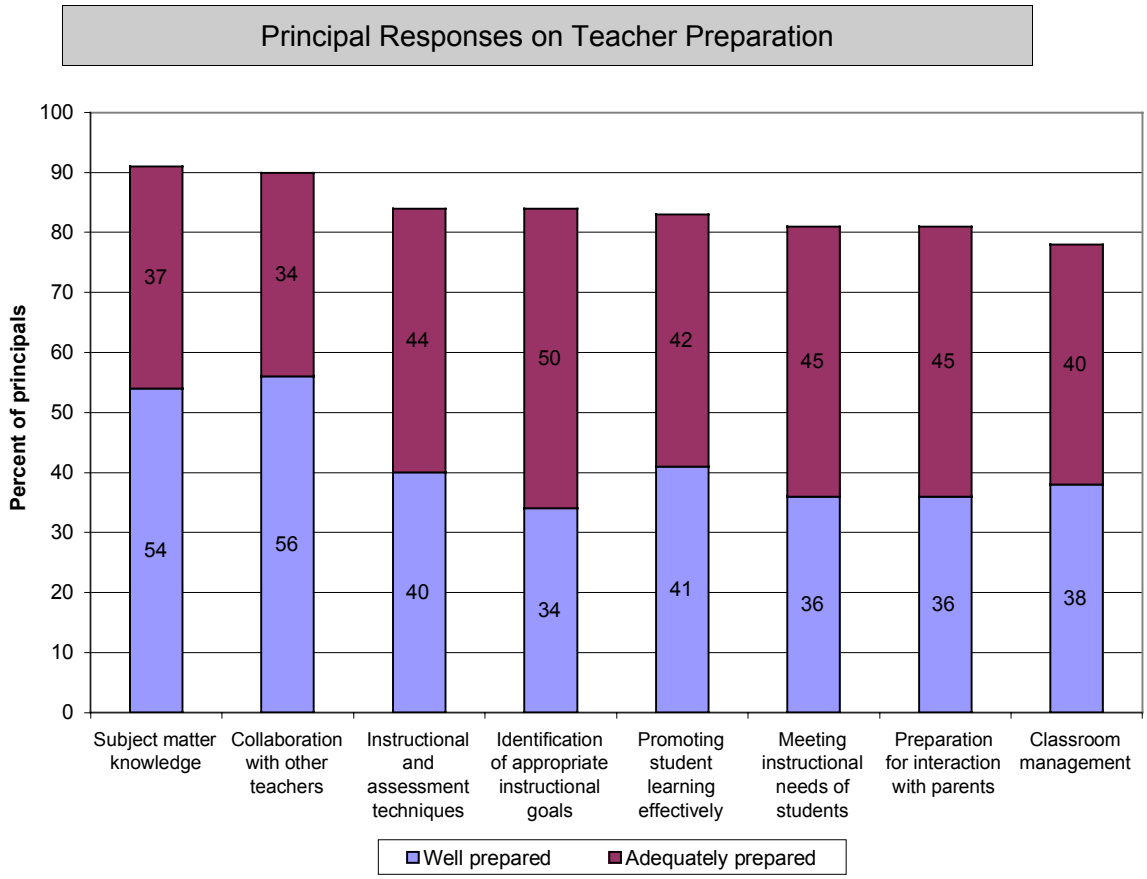
District Officials' Reports on Preparedness of Recently-hired Teachers



Source: SRI Survey of District Hiring Administrators (2001).
Note: See Appendix B for statistical information.

Our survey of principals netted similar results. In this survey, we included additional questions regarding the quality of new teachers from the top three university providers of teachers for their school. Figure 3-10 summarizes the principals' reports. Across all dimensions, almost all principals reported their recently hired teachers to be at least adequately prepared. And on all except two dimensions, fewer than half of the principals rated their recently hired teachers as well prepared.

Figure 3-10



Source: SRI Survey of California Principals (2001).
Note: See Appendix B for statistical information.

Looking across the dimensions, more than half of principals view teachers as well prepared in subject matter preparation and the ability to collaborate with other teachers. In contrast, just over a third see them as well prepared in identifying instructional goals, meeting the instructional needs of students at their schools, and managing their classrooms. They also rate teachers similarly on their preparation to work with parents.

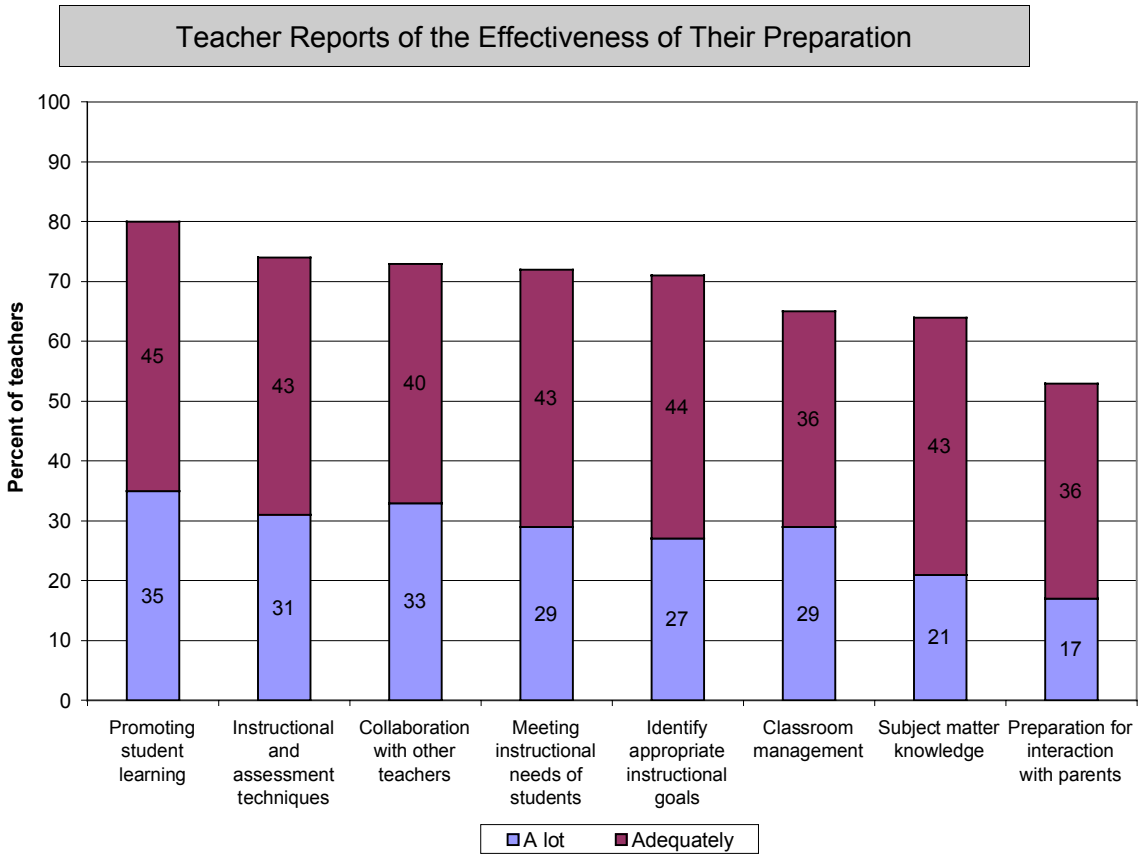
One could judge these survey results to show that teacher preparation programs are turning out a product suited to the task: the vast majority of principals reported that new teachers were adequately or well prepared. Yet there is room for improvement since, on almost all dimensions, the majority of administrators and principals do not report teachers as being well prepared. Most parents, we assume, would insist that their children's teachers be well prepared.

It is also useful to remember that administrators' and principals' rating of new teachers was in part a self-evaluation. Administrators and principals were being asked to make judgments about the quality of the new teachers they had hired.

Teacher Reports on Effectiveness of Their Preparation

In our survey of California teachers, we asked those who had completed a preparation program in the last 5 years or who were currently teaching and enrolled in a teacher preparation program to rate the effectiveness of their preparation program across the same dimensions. A majority of teachers rated themselves as adequately prepared across all dimensions, whereas smaller percentages reported that their preparation program had helped them "a lot" (Figure 3-11).

Figure 3-11



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Although there appear to be differences between the responses of the teachers and those of the principals, it is important to note that principals reported on the quality of the new teachers they had hired and teachers reported on the quality of their preparation programs. Across all dimensions, a majority of teachers reported that their preparation programs had helped them a lot or adequately. Teacher reports on program effectiveness ranged from a high of 90% reporting that their preparation programs had helped them promote student learning adequately or a lot, to a low of 53% reporting that their programs had prepared them adequately or a lot to work with parents.

We also were interested in examining whether teachers who attended the California State University System perceived their preparation differently than did those who

attended a University of California program or a program at an independent institution. Interestingly, there were no statistically significant differences across the responses of teachers who came out of these different sectors. In interviews, principals noted that there was typically as much variation within individual institutions with regard to the quality of its graduates as there was between institutions. One principal said,

> [The local CSU] is not one program, it is a bunch of different programs. Sure, I know some professors personally, and if they send me one of their graduates, I know that person will be good. But from other programs, I have no idea.

We also examined the responses of those teachers in our survey who were fully credentialed and those who were not fully credentialed and currently enrolled in a teacher preparation program. We hypothesized that those teachers who had followed a traditional route would have found their preparation more effective. The survey data did not support this hypothesis; there were no significant differences between those who received a credential before teaching (the traditional route) and those who taught before receiving a full credential (the nontraditional route).

These findings are surprising to us because they are inconsistent with our interviews with teachers who had completed programs and those who took the nontraditional route.[18] How could a teacher on an emergency permit who might have taken a few night courses rate such preparation as equal to that of a fully credentialed teacher? One explanation may lie in teachers' perception of what constitutes their "preparation." For teachers pursuing a nontraditional route, preparation, induction, and professional development are concurrent activities. Disaggregating influences on new teachers can be done only on an individual basis. In our interviews with teachers in our eight case study districts, we were struck by the variety of responses to our questions about how new teachers learned to teach. Many new teachers pointed to other teachers in the school as key sources of information and support. Others argued that a particular professional development activity had had the most influence on their practice. The variety of influences on new teachers' practice is perhaps best illustrated by the stories of real teachers. The following vignettes of new teachers' early teaching experiences point to the complex factors that go into shaping a new teacher's practice and effectiveness.

Maria's Story

Maria, who has a bachelor's degree in finance, started her career with a large manufacturing company but soon decided to change careers. A friend who was already teaching convinced her to apply for a teaching job in the large urban district where they both lived. Maria passed the CBEST, took a Spanish fluency exam, and spent a week working through the paperwork at the district office. Maria was offered a job in an elementary school and was granted an emergency permit. Before starting her new job, she attended the district's mandatory New Teacher Institute, a 40-hour training. According to Maria, the Institute was helpful in that it concentrated on "real practical stuff like classroom management, record keeping, and district policies." Knowing that she would have to earn a credential, Maria enrolled in one course at the local CSU. Her first year turned out to be very difficult. She was assigned to a 4th-grade class of mostly Spanish-speaking students (and mostly very active boys). Even though she spoke Spanish, she felt unprepared since she "had no idea how to teach them English."

Maria reported that her coursework at the local CSU was "okay," but that she needed a lot more help. "The classes were easy, nothing like finance classes." The district assigned her a mentor, but her mentor was located at another school and was rarely available. She did get some help from other teachers in her school, but she looks back at her first year with real regret. "I feel bad. I think that I did that class a real disservice."

Maria is now in her second year of teaching, continues to hold an emergency permit, and continues to take a few classes at CSU. She feels that she is having a much more successful year because of the district's decision to implement the Open Court reading program. Maria reports that her Open Court training was "the most important preparation I have gotten. Now I know exactly what I am supposed to do."

Maria's remorse over her first year was echoed by many of the emergency permit teachers we interviewed. In Maria's case, her most significant preparation turned out to be the district's Open Court training. Some will be concerned about the limits of that kind of preparation, but for Maria a very structured program and very concrete instructional guidance were helpful. Compared with her coursework at the local CSU and her brief orientation to the district, she believed that her Open Court training provided her with the clear and concrete steps necessary to teach reading. Her case points to the blurring of the lines between teacher preparation, induction, and professional development in districts with large numbers of underprepared teachers.

Michael's Story

Michael is a first-year teacher in a medium-size suburban high school district. He attended Dartmouth, graduating with a degree in government, and went on to work in Washington, D.C., before deciding to become a teacher. Michael moved home and enrolled in a teacher education program at a private university. He reported that it was an excellent program. In 12 months, he earned a master's degree in education, as well as a CLAD credential.

According to Michael, the program is "highly structured," aimed at "bringing us along slowly." Students are assigned master teachers, who are carefully selected by the program. Students begin by observing classes taught by their master teachers, then teach one lesson at a time, then teach a week at a time, and finally teach a full semester. He was observed teaching frequently, and often videotaped, which he described as a very valuable teaching tool. He, along with his classmates, attended courses in the afternoons and evenings, after student teaching. Michael enjoyed the courses, which were more theoretical but still applicable to the actual teaching he was doing. He cited a course on school reform and another on cognitive processing, as well as the assignment of having to shadow a high school student for several days in a row, as particularly useful. Michael said he was eager to teach more, and more quickly, than the program allowed, and he would have appreciated a more individualized approach; still, he respected the design of the program.

An excellent academic background and a high-quality preparation program appears to have made Michael well prepared to teach. His program included many characteristics associated with effective teacher preparation programs. He went through the program with a cohort of other teacher candidates. He had early field experiences. The program placed a heavy emphasis on classroom observations and practice teaching in carefully selected settings with master teachers. Efforts were made to link theory to practice and to make use of innovative teaching tools such as videotaping. The program also was highly structured, so that Michael's preparation followed a logical sequence.

Other teachers interviewed who felt particularly well prepared also reported that a structured program, early field experiences, extensive time in classrooms, and exposure to master teachers were central features of their preparation programs. Dana's experience is illustrative of the point.

Dana's Story

Dana is a first-year 4th-grade teacher. She attended her teacher preparation program full-time and feels it was a very effective program. She chose the early childhood option rather than the general option because of the focus, but also because students were placed in cohorts within classes offered both on campus and on the school site where the cohort was based. Because of this structure, every class had a practical application and was coordinated with other course offerings to provide more coherence (something not done in the general option). When Dana entered student teaching, she was placed with two other student teachers whom she was able to observe and talk with on a regular basis, and the supervisor was on-site every day. She also attended monthly meetings with her academic advisor. Dana feels she made the right choice: "I feel very prepared, which is a credit to the option. We were taught to reflect and assess our teaching."

These vignettes should not be interpreted to suggest that only new teachers who followed the traditional route into the profession are effective. We also met thoughtful and apparently well-prepared emergency permit teachers. Robin was an example of such a teacher.

Robin's Story

Robin is a first-year teacher in a large urban district, and she holds an emergency permit. Her elementary school has more than 1,800 students, and her classroom is in a 1950s vintage bungalow. Half of her students are primarily Spanish speaking. Robin had been a civil rights lawyer before deciding to teach, so she was highly educated. Robin's parents, who are both educators in the same school district, were deeply concerned about Robin's decision to begin teaching without completing a preparation program. They offered to support her for 6 months if she agreed to spend time volunteering in the classroom of an accomplished teacher they knew in the district.

Robin had to drive across town every day to work with this accomplished teacher, but she believes it was well worth the effort. "I realize now that I wouldn't have had a clue about teaching if it wasn't for the time I spent with Mrs. Rojas." Robin admits that she faces many challenges. "This is the hardest thing I have ever tried to do." However, from our observations of her classroom, it appears that she has the drive and skills to become an excellent teacher.

Robin's unconventional route into the profession was facilitated by her parents, who were well aware of the hardships associated with teaching without preparation. Policy-makers also are aware of the problems associated with placing untrained emergency permit holders in classrooms as the teacher of record. Among other policy responses, the state has invested millions of dollars in intern and pre-intern programs

designed to provide new nontraditional-route teachers with a structure and coherent program of preparation. Next, we examine the quality of these programs.

The Quality of Intern and Pre-Intern Programs

The expansion of the intern program and the initiation of the pre-intern program represent a clear policy response to the problem of large numbers of underprepared teachers in the state's schools. Both programs are designed to provide structured support to teachers of record who have not yet earned a preliminary or professional clear credential. The intern program as originally conceived is in fact a preparation program, and successful completion results in a preliminary—or, in some cases, a professional clear—credential. Here we look at the data on whether intern programs produced teachers who were as qualified as those from traditional programs. We also explore the limited information available on pre-intern programs.

Quality of Interns' Preparation. Making overall judgments about interns' preparation is complicated by the differences across these programs. In some programs, prospective teachers get 9 months of coursework and clinical experience before being assigned to a classroom. In other cases, a quick summer program is all the preparation interns get before becoming the teacher of record.

Judgments about intern quality are also complicated by the differences between those who choose an intern program and those who choose to go through a traditional program. According to principals we interviewed, interns are more likely to come from the community the school serves and are not as likely to be able to afford not to work until they get a credential.

Given these caveats, we do know that as the teacher of record, interns have fewer opportunities than traditional-route teachers to receive daily feedback from a supervising teacher. In our survey of teachers, only 32% of interns reported receiving daily feedback from a supervising teacher during their student teaching. By comparison, 83% of traditional-route teachers reported receiving such feedback. Like other underprepared teachers, interns typically do some or all of their student teaching in their own classrooms. What daily feedback they do receive usually comes during the portion of student teaching they complete in another teacher's classroom during their summer or other breaks in the school year.

In our case studies, principals made mixed comments about interns. Principals who hired interns were in schools with shortages of qualified teachers and thus were happy to have an underprepared teacher getting structured support rather than a teacher with an emergency permit with no organized program. Moreover, given principals' focus on the commitment of individuals and their willingness to work hard, many principals reported that they enjoyed working with interns:

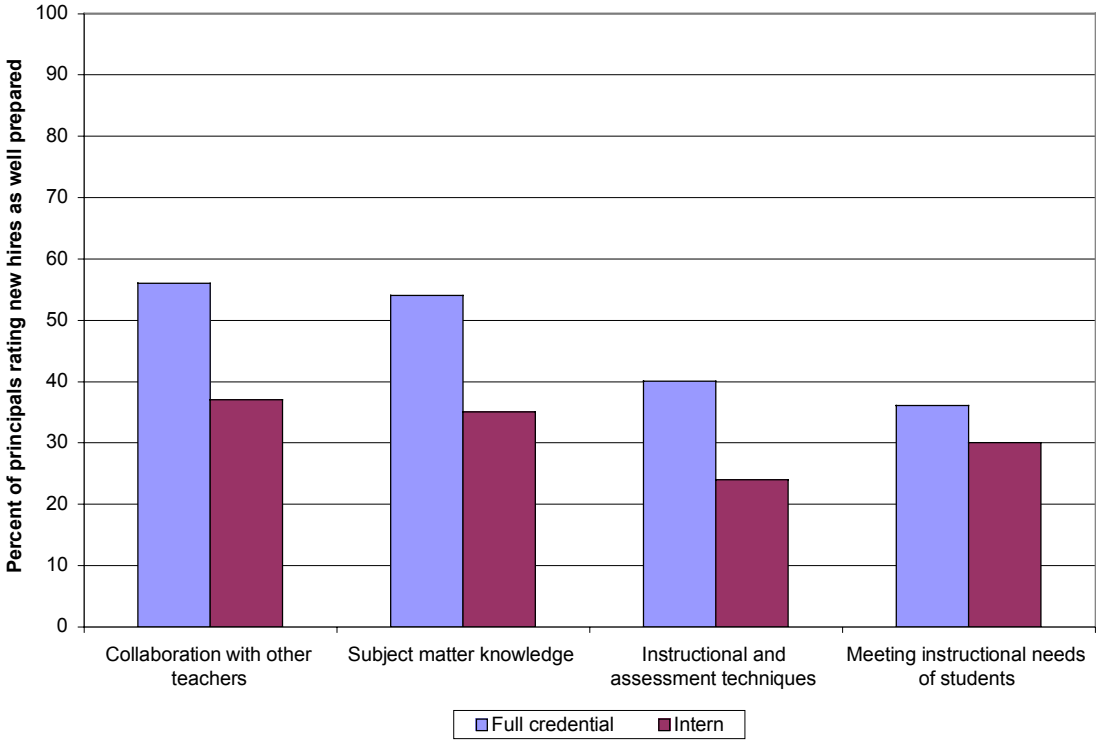
> These are young people from our community; they speak the kids' language, they know some of the kids, they like our kids — it's not like they think there is something wrong with these kids. Sure, they come in pretty raw, but you know, over the long haul they make pretty good teachers.

This last sentence captures much of the debate about interns. We are putting teachers with only minimal preparation into a classroom—and, as we have shown earlier in this chapter, in classrooms with low-achieving students. Yet if they stick with the profession, they may *become* good teachers.

On our statewide survey of principals, we asked those who had hired interns and fully credentialed teachers to rate their preparedness. These principals reported significant differences between interns and traditional-route teachers in their skills and knowledge across four important dimensions (Figure 3-12). Fewer principals reported that interns were well prepared than reported that their fully credentialed recent hires were well prepared in terms of working collaboratively with others, their subject matter knowledge, their knowledge of instructional and assessment techniques, and their ability to meet the needs of the student population at their schools.

Figure 3-12

Principals' Perceptions of Preparedness of New Hires:
Interns vs. Fully Credentialed Candidates



Source: SRI Survey of California Principals (2001).
Note: See Appendix B for statistical information.

Again, these overall patterns mask important differences across programs and across individuals. Our interviews with interns in our eight case study districts suggest a good deal of variation in programs and in teachers' satisfaction with those programs. Two teachers' experiences are illustrative of the point.

Maureen's Story

Maureen is a 1st-grade bilingual teacher (Hmong/English). She began teaching at her elementary school as an intern through the local IHE internship program after receiving her bachelor's degree. Looking back, she says, "I wasn't prepared for it, but I took the job as an intern because I needed money and couldn't afford a full-time preparation program." In the intern program, she rarely saw her buddy teacher or her supervisor and wasn't well supported in her first 2 years. Her first year was a struggle, having to teach a bilingual class with little training in English language development and instruction, and she was ready to quit. But Maureen completed her credential after a year in the intern program and felt she learned a lot, even though she had to rely mostly on on-the-job training: "My prep program didn't really prepare me for teaching." She felt better the second year, but not quite confident as an effective teacher. Looking back, she says, "I wouldn't recommend an internship — do the preparation and student teaching first and get a feel for it before you jump in."

Gloria's Story

Gloria is a kindergarten bilingual teacher (Spanish/English). Born in Mexico and raised in the United States, Gloria attended the local CSU and was immediately hired as a bilingual teacher on an emergency permit. Thinking back on that first year, Maria says, "I walked into that classroom, and there were 20 kids. No one spoke English. I had no idea how to teach them—it was a wasted year for all of us. Her second year, Gloria moved to a new school district and enrolled in its internship program for bilingual teachers. She loves the program and says that her professional life has changed completely. "I meet with my group one evening a week and on Saturdays. We are all going through the same thing and can share lessons. My supervisor, who taught these same kinds of kids for 20 years, is in my class at least one morning a week and sometimes more. I really feel like I am becoming a good teacher."

These two anecdotes underscore the challenge in making generalizations about a group of interns whose experiences vary so widely. Maureen entered an intern program right out of college, and the program did not deliver on the support she needed. Gloria had a year as an emergency permit teacher and then entered a well-structured program that has provided her continued support. But there are some similarities worth noting. Both shared their students' culture and language, both were faced with the enormous challenge of teaching a classroom where language development was the fundamental task for all students, and both had no preparation for addressing this challenge when they first walked through the door.

A case can be made for the benefits of an intern programs with their sequential set of courses, mentoring support, and grounding in the practicalities of the classroom, particularly when compared with the experiences of teachers holding emergency permits. However, it is hard to make the case for placing teachers with little preparation in the most challenging classrooms in the state. Similarly, the rapid expansion of the programs clearly will provide more support for teachers who otherwise might be on emergency permits. Yet these programs do nothing to shore up incentives for prospective teachers to get trained before taking over a classroom. In fact, the expansion of the intern programs without substantial efforts to reinforce incentives for teachers to receive training before teaching will only flood schools serving the neediest students with more underprepared teachers.

Quality of Pre-Intern Programs. The pre-intern programs are a more recent policy initiative, and only limited data on the programs are currently available. Previous research suggested that pre-interns had lower attrition rates than emergency permit teachers, but the data were limited to retention in teaching over 1 year.[19] Our survey did not include a sufficient number of pre-interns to address questions of quality. Our interviews with teachers in pre-intern programs, program administrators, and school principals suggest that the quality of the programs is more uneven than the quality of intern programs. In particular, many of the programs we visited were nothing more than test preparation programs—efforts to get these individuals to pass the subject matter tests so they could enroll in intern programs. One pre-intern program we visited included modest levels of mentor support, but this was the exception.

Advocates of pre-intern programs argue that moving emergency permit teachers into a more coherent preparation program and assisting them with subject matter knowledge is a positive step. Critics argue that pre-intern programs fall far short of the support and preparation that classroom teachers should have and amount to a "sanitizing" of the emergency permit label. Clearly, there is a good deal of legitimate concern in allowing pre-interns to be teachers of record which is reflected in conflicting policies. For example, pre-interns are not allowed, by state law, to student teach because they have not met subject matter requirements. Yet the pre-intern certificate allows them to be the teacher of record.

The Promise of Blended Programs

A very different policy initiative has been the introduction of a blended approach to teacher preparation. The programs, which are designed for undergraduates interested in a career in teaching, blend core subject matter courses with teacher preparation courses and field experience. The programs allow students to earn a bachelor's degree and a teaching credential more quickly than is possible in a traditional route. Blended teacher preparation programs are spreading fast and are now offered on all CSU campuses. But because the programs are new and are just now producing their first graduates, we have no data on their effectiveness.

The relevant question is what promise these programs hold for the preparation of future teachers. On some campuses, the programs are rigidly structured: only students who meet rigorous admission criteria are selected, and students go through the entire program with the same cohort of students and follow a set sequence of courses, full-time. These programs have significant advantages. They build a learning community among students and staff, and they ensure that highly motivated and bright young people move through an accelerated program into the profession.[20] The shortcoming of

this approach is that the program, by definition, excludes students who do not meet the tough admission requirements or who cannot attend school full-time. Therefore, such programs are typically very small and are likely to have little overall impact on the shortage of qualified teachers, regardless of the quality of their graduates.

On other campuses, the blended programs are seen as a core approach to preparing large numbers of teacher candidates. In a context in which so many of their students take jobs right after completing a bachelor's degree, teacher education faculty argue that it makes sense to begin these students' preparation while they are undergraduates. The hope is that large numbers of students can get through their undergraduate coursework and their teacher preparation before taking a teaching job. In these cases, blended programs are seen as an opportunity to counter the prevailing trend toward increasing numbers of emergency permit teachers filling their preparation programs. The shortcoming of the approach in which large numbers of candidates are involved in the blended program is that the cohort structure and the clear sequencing of coursework may have to be abandoned.

If blended programs are to play a central role in addressing the need for more high-quality teachers in the state, policy-makers will need to address the financial needs of undergraduates. Moving through a blended program and into the teaching force quickly requires that students focus on their studies rather than their jobs. Although blended-program students are eligible for existing undergraduate financial aid, they are not eligible for financial aid programs for teachers, such as the Governor's Teaching Fellowships and the Assumption Program of Loans for Education (APLE) because they require a bachelor's degree or are not available until blended-program students have completed 60 semester units of undergraduate coursework. The CSU campuses we have studied in greater depth have found it quite difficult to attract and retain a diverse student body in blended programs without supplementary financial assistance.

Conclusion

The rising number of teachers without appropriate credentials in the state's K-12 system has motivated major changes in the system of teacher preparation. Teacher preparation institutions have taken steps to increase the number of teacher candidates they produce and to create more flexible programs designed to meet the needs of a changing and diverse set of students.

The biggest impact on the teacher preparation system has been the influx of students who are already practicing teachers. Key components of that system, especially supervised student teaching, have suffered as a result. Major policy initiatives have been launched to develop programs designed to provide more structured support for these individuals. These programs have had the positive impact of helping to organize —and perhaps even accelerate — the preparation of underprepared teachers toward a full credential. Yet the programs' growth also has lessened the incentive for individuals to get preparation before beginning to teach.

We also have documented how the simultaneous influx of large numbers of underprepared teachers into the schools and into teacher preparation programs has blurred the institutional roles and responsibilities for preparing new teachers. Teacher preparation takes place concurrently with induction support (formal or informal) and professional development.

The question remaining is how best to move forward. Given that there are still tens of thousands of emergency permit teachers in classrooms and given projections that these number will grow, should the number of interns continue to grow? Should the internship approach become the modal route into the profession? Do we want tens of thousands of interns teaching in the schools? Are there sufficient numbers of accomplished veteran teachers to support them?

Beyond the institutional challenges, the increasing maldistribution of well-prepared teachers and of other educational resources, especially adequate facilities, is taking a heavy toll on poor, minority, and underperforming students. Failure to address these inequities only accelerates the clear trend toward widening gaps between the educational haves and have-nots.

The system of teacher preparation has been unalterably changed by the magnitude of teacher shortages in many parts of the state. Any attempt to repair teacher preparation without also attending to the underlying conditions that brought about the dramatic changes is doomed to failure. At a time of shrinking state resources, it will take extraordinary political will to undertake comprehensive solutions. At the very least, teacher preparation will have to be reinvented to make it relevant to current circumstances. More work to rebuild incentives for new teachers to get trained first needs to begin immediately, and at the same time, schools must be reconfigured to respond to the underprepared-teacher crisis. At the same time that preparation programs struggle to prepare teachers before they teach, schools must be prepared to adjust to the needs of underprepared teachers. If new teachers are not prepared to teach, they should not be placed in classrooms alone. Internships should be internships, rather than a thin varnish of support for full-time underprepared teachers. Ultimately, all schools, but especially schools with large numbers of underprepared teachers, must be turned into places where the learning needs of both adults and children are met.

Endnotes

[1] See California State University. (2001). *2000-2001 Teacher education. Annual report on teacher education in the California State University.* Long Beach, CA: Author.

[2] See California State University. (1998). *CSU's commitment to prepare high quality teachers*. Long Beach, CA: Author.

[3] These goals are articulated in detail in the *Standards of Quality and Effectiveness for Blended Programs of Undergraduate Teacher Preparation for Multiple and Single Subject Credentials*, adopted by the California Commission on Teacher Credentialing on October 4, 2001, to help guide blended programs through the planning process.

[4] This number does not include the special education credential.

[5] University of California, Office of the President. (2001). Personal communication.

[6] California Commission on Teacher Credentialing (CTC). (1998). *Numbers of multiple and single subject teaching credentials issued by the Commission upon the recommendation of California institutions of higher education with Commission-approved programs*. Sacramento, CA: Author.

CTC. (1999). *Report on the number of individuals receiving California certification.* Sacramento, CA: Author.

CTC. (2000). *Credentials granted during the fiscal year 1998-99*. Sacramento, CA: Author.

CTC. (2001a). Personal communication.

Note: Data for years 1991-92 to 1996-97 are from CTC (1998); data for 1997-98 are from CTC (1999); data for 1998-99 are from CTC (2000); data for 1999-2000 are from CTC (2001). Annual totals include first-time and new-type, multiple- and single-subject credentials. Totals include internship, preliminary, and professional clear credentials. Total for 1998-99 is a "workload number," indicating the number of credentials processed by CTC. CTC estimates that workload numbers are within 1% to 5% of the total number actually issued. These data do not include district interns.

[7] California Commission on Teacher Credentialing (CTC). (1998). *Seven year summary of the multiple subject, single subject, and special education specialist internship credentials.*

CTC. (2000). Internal document.

CTC. (2001b). Personal communication.

Note: Data and analysis for years 1991-92 to 1997-98 are from CTC (1998); data for year 1998-99 are from CTC (2000); data for year 1999-2000 are from CTC (2001). Analysis for year 1998-99 was conducted by SRI International. Annual totals include first-time and new-type intern credentials issued for multiple-subject, single-subject, and special education credentials. Totals for all years are "workload numbers," indicating the number of intern credentials processed by CTC. CTC estimates that workload numbers are within 1% to 5% of the total number actually issued.

[8] CTC. (2001). *Report on the issuance of internships and pre-internship grants for 2001-2002 and proposal to issue a contract for external evaluation of internship programs.* Retrieved on November 2001, from the World Wide Web: http://www.ctc.ca.gov/aboutctc/agendas/july_2001/prep/prep2.html

CTC. (2001b). Personal communication.

Note: Data for years 1994-95 to 2000-01 are from CTC (2001), *Report on the issuance of internships and pre-internship grants for 2001-2002 and proposal to issue a contract for external evaluation of internship programs.* Data for year 2001-02 are from CTC (2001), personal communication.

[9] Same sources as endnote 8.

[10] The percentages were estimated by dividing the total number of program participants as reported in *Report on the Issuance of Internships and Pre-Internship Grants for 2001-2002 and Proposal to Issue a Contract for External Evaluation of Internship Programs* (CTC, 2001) by the total number of noncredentialed teachers as reported by CDE (2001) in PAIF 2000-01.

[11] See, for example, The Abell Foundation (2001). *Teacher certification reconsidered: Stumbling for quality*. Baltimore, MD: Author.

[12] California Department of Education, Educational Demographics Unit. (2001). *CBEDS Professional assignment information form (2000-01).* Retrieved 2001 from the World Wide Web: http://www.cde.ca.gov/demographics/files/paif.htm

Note: The individuals in this analysis identified themselves as interns in the PAIF form. The number of interns derived from the PAIF does not match the numbers reported by the CTC for intern credentials issued or the number of participants in intern programs.

[13] By special request, CTC and STRS provided data to SRI on credentialing and contribution to STRS 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.

[14] Traditionally and nontraditionally prepared teachers were asked the extent to which they agreed with the statement "Courses were available and I was able to enroll in them when I was ready to take them." The following table presents the complete results of this analysis:

Preparation Route of Teacher	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Row Total
Traditional	2%	3%	1%	49%	45%	100%
Nontraditional	6%	16%	7%	35%	36%	100%

Chi-sq: p=0.0235, n=169

[15] The following table presents the results of the analysis of the responses of traditionally and nontraditionally prepared teachers related to the learning opportunities offered by their preparation programs:

Question	Traditionally Prepared		Nontraditionally Prepared		n
	Yes	No	Yes	No	
Did/Does your teacher preparation program have field experiences, such as observations of full-time K-12 teachers, in the *first* quarter or semester of your program?	91%	9%	75%	25%	193
Did/Does your teacher preparation program have a student-teaching component in the classroom of a regular classroom teacher, supervised by university or adjunct faculty?	99%	1%	77%	23%	190
Did/Does your teacher preparation program have formal test preparation for tests such as Praxis, SSAT, MSAT, or RICA?	30%	70%	49%	51%	183

Chi-sq: p=0.009

[16] For more information on the importance of student teaching, see:

Humphrey, D. C., et al. (2000). *Supporting and preparing new teachers: A literature review.* Washington, DC: U.S. Department of Education.

Joyce, B. (1988, September-October). Training research and preservice teacher education: A reconsideration. *Journal of Teacher Education*.

Edmundson, P. (1990). A normative look at the curriculum in teacher education. *Phi Delta Kappan*, *71*(9).

Evertson, C. M., Hawley, W. D., & Zlotnik, M. (1985, May-June). Making a difference in educational quality through teacher education. *Journal of Teacher Education*.

Andrew, M., & Schwab, R. (1995). Has reform in teacher education influenced teacher performance? An outcome assessment of graduates of eleven teacher education programs. *Action in Teacher Education, 17*, 43-53.

[17] For the most recent review of the literature of the relationship between teacher preparation and student learning, see Wilson, S. M., Floden, R. E., & Ferrini-Mundy, J. (2001). *Teacher preparation research: Current knowledge, gaps, and recommendations*. Seattle, WA: Center for the Study of Teaching and Policy.

[18] Of course, there are a host of methodological reasons for lack of significant differences. Both sets of teachers may be seeking to answer the survey in a socially acceptable manner; teachers may prove to be poor judges of their own needs; etc.

[19] Tyson, S., Hawley, H., & McKibben, M. (2000). *Pre-internship teacher education program: A progress report to the legislature*. Sacramento, CA: California Commission on Teacher Credentialing.

[20] For more information on blended programs, see Esch, C., Shields, P., Tiffany-Morales, J., & Stites, R. (2001). *Evaluation of the Blended Teacher Education Program at California State University: Second-year report*. Menlo Park, CA: SRI International.

4. Recruitment of Teachers into California Schools

Recruitment Policy Initiatives

- Over the past 2 years, the Governor and legislature have invested more than $300 million in efforts to recruit teachers into the profession, especially in low-achieving schools.
- New initiatives include the Teacher Recruitment Initiative Program (to establish regional teacher recruitment centers), the Teaching as a Priority Block Grant (to award districts grants to lower the number of emergency teachers in low-performing schools), and the Governor's Teaching Fellowships Program (to provide fellowships to teacher preparation students who agree to teach in a low-performing school).
- Other initiatives aim to recruit and retain qualified teachers by helping school districts offer higher salaries, providing tax credits for teachers, authorizing retired teachers to return to the classroom without losing their benefits, and rewarding teachers in low-performing schools that show improvement.

Early Implementation of State Policies

- CalTeach was used by 16% of the teachers in our statewide survey to help find a job.
- All six regional recruitment centers are up and running; districts received $100 million in TAP grants for local recruitment efforts; 1,000 teacher candidates currently have Governor's Fellowships.
- Most of the new recruitment initiatives were just being put in place in the 2000-01 school year, so we cannot yet gauge their impact.

District Recruitment and Hiring

- Recognizing that the local community is the best source of new teachers, all districts rely on informal networks to identify potential candidates.
- Districts without teacher shortages can put substantial effort into finding candidates who match their needs well.
- Hard-to-staff districts face a strikingly different task: simply finding enough applicants for the available jobs, regardless of qualifications. Administrators in these districts have to employ more aggressive tactics, such as recruiting outside the field of education.
- Bureaucratic obstacles, such as cumbersome application processes, are more likely to occur in larger districts. But such obstacles do not deter districts that are attractive to candidates from hiring fully prepared teachers.

As teacher candidates graduate from teacher preparation programs—or seek work before finishing, or even beginning, a program—they face the task of finding the right job. District administrators and school principals face the challenge of finding qualified teachers willing to teach in their schools. As is the case in most labor markets, some employers are more attractive to candidates than others. The hard-to-staff districts and schools are more likely to lose teachers and to have more job openings, and so face the biggest challenge in recruiting qualified candidates.

California policy-makers have aggressively addressed the need to recruit more teachers into the profession, with a focus on lower-achieving schools. These efforts range from programs designed to provide potential teachers with appropriate information on how to become teachers, incentives for individuals to pursue a career in teaching, recruitment centers to match teacher candidates with districts that need teachers, and funds provided by the state directly to districts to support their own recruitment efforts.

In this chapter, we examine these new recruitment initiatives and review available data on their early implementation. We then examine the factors that motivate teachers to take jobs and present our findings on district recruitment and hiring practices, paying special attention to the practices of districts with teacher shortages. Finally, we examine barriers to districts' ability to hire, and we reflect on the prospects of the new state recruitment efforts for solving the problem of underprepared teachers.

State Recruitment Policies

As state policy-makers have sought to address the shortage of qualified teachers willing to take jobs in California's schools, they have looked to strategies to attract more teachers into the profession and to support districts and schools, both directly and indirectly. These recent efforts began in 1997-98 with the passage of SB 824 (CalTeach) and expanded dramatically in the 1999-2000 legislative year with three new recruitment initiatives and the expansion of two others, investing a total of $151.6 million in the recruitment of new teachers. All these efforts were continued in the 2001 budget. The recruitment initiatives are aimed at candidates who are in the process of obtaining a credential, those who have already obtained a credential, and those who have not yet considered teaching as a career. Taken together, these initiatives represent a major effort to reduce the number of underprepared teachers in the state.

The **California Center for Teaching Careers (CalTeach)** is a statewide recruiting effort administered by the California State University Institute for Education Reform and housed at CSU Sacramento, Long Beach, and Fresno. SB 824 established CalTeach and appropriated $500,000 in 1997-98 from federal Goals 2000 funds. CalTeach offers both a Web site and a toll-free number for those interested in pursuing a career in teaching and those looking for teaching positions. CalTeach was allocated $2 million in 1999-2000, $9 million in 2000-01, and $11 million in 2001-02.

The **Teacher Recruitment Initiative Program (TRIP)** established regional teacher recruitment centers that serve as clearinghouses for information on the teaching profession and focus on recruiting teachers to low-performing schools, especially those with high percentages of underprepared teachers. Tasks of the centers include conducting outreach programs, screening and distributing resumes of prospective teachers, scheduling job interviews, providing technical assistance to school districts to streamline hiring processes, and referring candidates to teacher preparation programs.

There are six teacher recruitment centers: Northern California (serving 31 counties); Central California (serving 19 counties); Riverside, Inyo, Mono, San Bernardino Counties; San Diego, Orange, Imperial Counties; Los Angeles County; and the Los Angeles Unified School District. TRIP was allocated $9.4 million in 2000-01 and again in 2001-02.

The **Teaching as a Priority (TAP) Block Grant** offers competitive grants to districts to provide incentives to help lower the number of emergency teachers in low-performing schools. Funds may be used to recruit and retain credentialed teachers through strategies such as signing bonuses, improved working conditions, improved teacher compensation, and housing subsidies. Funding for TAP grants is allocated on a per pupil basis for all students enrolled in schools ranked in the bottom half of the API. Districts receive $44 per pupil for schools ranked in the first, second, or third decile and $29 per pupil for schools ranked in the fourth and fifth deciles. All funding generated by schools ranked in the first, second, or third decile must be spent on those schools specifically. The TAP program was allocated $118.6 million in 2000-01 and in 2001-02.

The state also offers financial incentives for teacher candidates. The **Cal T Grant Program** is designed to increase access to teacher preparation programs by providing awards for prospective teachers enrolled in fifth-year teacher preparation programs. Funding allows for up to 3,000 awards annually—approximately $1,600 for CSU students, $3,600 for UC students, and $9,000 for students at independent IHEs.

The **Assumption Program of Loans for Education (APLE)** assumes educational loans for students who agree to teach for 4 years in a specified shortage area (math, science, special education) or in a low-performing school, a school that serves a large population of students from low-income families, or a hard-to-staff school. The program assumes $2,000 in the first year of teaching and $3,000 each year for three subsequent years, for a total of $11,000. SB 1330 (2000) provided an additional $1,000 of loan liability coverage per year for teachers who teach math, science, or special education in schools ranked in the lowest two deciles of the API. The number of agreements has climbed steadily from 400 in 1998 to 5,500 in 1999 to 6,500 in 2000 and in 2001.

The **Governor's Teaching Fellowships** provide $20,000 to graduate students who agree to teach for at least 4 years at a school performing at or below the 50th API percentile. Money may be used for tuition and living expenses while students are enrolled in a teacher preparation program at an accredited college or university. The 2000-01 budget allocated $3.5 million for the program; this figure grew to $21 million in 2001-02.

In addition, a series of **compensation initiatives** have sought to make teaching a more attractive profession. These include assistance to districts to raise beginning-teacher salaries to $34,000 (SB 1643), personal income tax credits for teachers ranging from $250 to $1,500, bonus pay to teachers in lower-performing schools whose student performance improves (up to $25,000), and general fund increases aimed at providing districts with sufficient funds to pay teachers. All these initiatives are aimed at making the teaching profession more competitive with private industry, where salaries traditionally have been higher.

Early Implementation of New State Recruitment Policies

In combination, these initiatives have the potential to create a comprehensive effort to attract individuals into the teaching profession. CalTeach and the recruitment centers can provide up-to-date information to individuals interested in teaching; the grant and loan programs can serve as incentives and support to teacher candidates as they pursue a credential; the compensation policies can serve as incentives for credential recipients to seek jobs in the profession; and the combination of the recruitment centers and district initiatives can make sure that candidates are matched with appropriate jobs.

It is still too early to assess the degree to which these initiatives will meet their ambitious goals. Most were still being put in place during our data collection in the 2000-01 school year. Still, through secondary sources, our case study work, and limited survey data, we can begin to report on early progress.

CalTeach is the oldest of these initiatives and thus the most mature, both programmatically and in terms of its visibility to the public. CalTeach boasts 55,000 registered people, 10,000 resumes posted, 15,000 applications submitted, and 1,200 individuals registered as recruiters. The phone center has received more than 35,000 calls; the Web site receives nearly 12 million hits monthly. Most of the people who contact CalTeach do not have a credential but are interested in teaching. In terms of CalTeach's impact on the field, 16% of the new teachers in our statewide teacher survey used the CalTeach Web site as part of their job search.

The recruitment centers were selected in fall 2000 but were generally not up and running until the beginning of 2001. In their early work, the centers have served a remarkable variety of people, from teachers just exiting a credentialing program to reentrants, out-of-state credentialed and uncredentialed candidates, and potential career changers. Unqualified candidates are given information about intern programs and more traditional teacher preparation programs. Qualified candidates are matched with districts and assisted in the application process. Districts fill out a district inventory to identify what types of teachers they need; teacher candidates fill out a questionnaire about what districts and subject areas they want to teach in. Recruitment centers send out application materials (a letter from the recruitment center, the California standard application, and a copy of the teacher's credentials and resume) to all districts specified by individual candidates. If districts are slow to respond, the recruitment centers follow up.

Some of the recruitment centers are challenged with the large number of districts in their purview. For example, the Northern California Recruitment Center has a staff of 10 who must serve 31 counties and 432 districts. Thus far, 60 districts have signed memoranda of understanding to work with the recruitment center.

Although the recruitment centers are just getting off the ground, we found mixed reactions to the centers' potential to help with the shortage of qualified teachers in low-performing schools. Some case study districts are optimistic about getting references or actual hires from their recruitment center. At other districts, the recruitment centers are not expected to play any significant role. One district was concerned about having its description and salary information available next to its neighboring districts' information. District administrators feared they would lose teacher candidates who see the more desirable location and higher salaries of neighboring districts.

TAP proved more problematic to initiate because some of the funding needed to be collectively bargained (e.g., stipends for teachers, class-size reduction, and seniority and transfer policies). Just under half of all school districts were eligible for TAP. Of

the 579 eligible, 247 (43%) submitted proposals, and 212 districts were awarded grants totaling $83.7 million. The state ran a second grant application in May to award more of the money. In the end, the state allocated approximately $100 million out of $118.6 million.

Districts used a diverse set of strategies with their TAP grants, including signing bonuses, additional supplies, release time, preservice and inservice training, mentoring, and housing subsidies. Because these grants were awarded in spring 2001, they had yet to have any impact in the participating districts.

The expansion of incentives for students to pursue teacher preparation—APLE, Cal T Grants, and the Governor's Fellowships—are certainly promising. Cal T Grant provides basic support for teacher preparation, while APLE and the Governor's Fellowships have clearer targets of addressing shortage areas and low-performing and hard-to-staff schools. Participation in the programs is rising. For example, the number of students with Governor's Fellowships increased from 250 in school year 2000-01 to 1,000 in school year 2001-02. These teacher candidates have all committed to teaching in low-performing schools (below the 50th API percentile). Yet it is difficult in the case of such programs to judge whether participants would have opted for a different professional track in the absence of the incentives. We won't know the impact of the policies until we see (or do not see) reductions in the number of underprepared teachers in the state's schools.

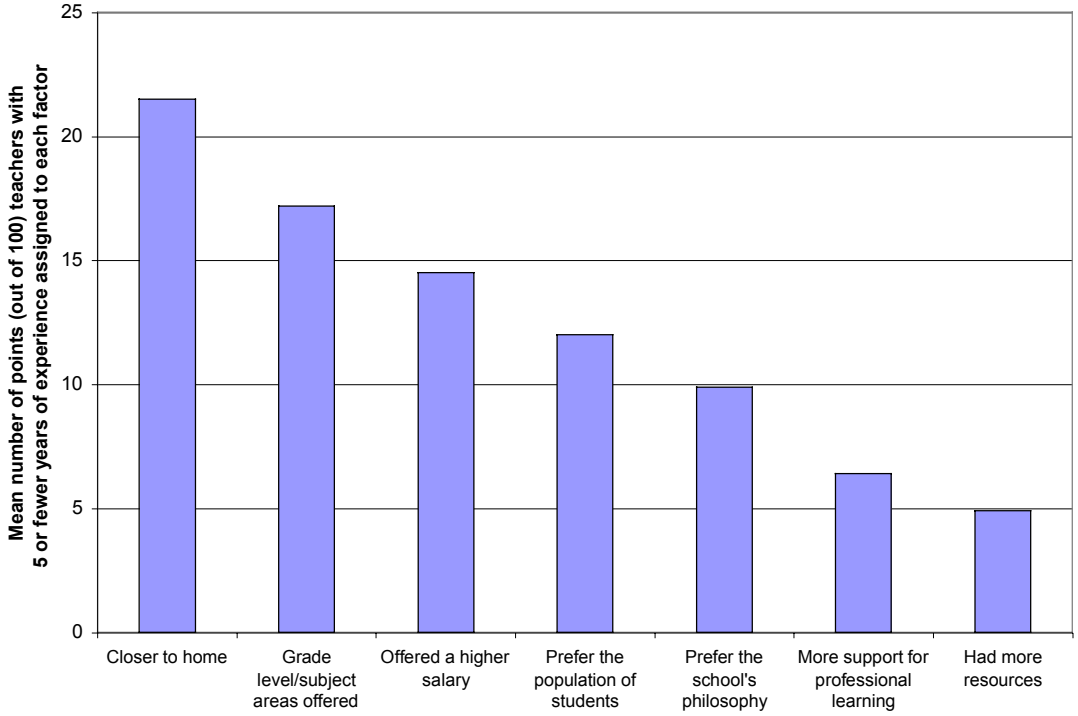
What Matters to Teachers

These state initiatives are designed to recruit more teachers into the profession and to attract more qualified teachers into the hardest-to-staff schools. When we talked to teachers about how they chose their jobs, there was a consistent focus on location and assignment. Teachers want to work where they live, and they want a class at their preferred grade level or in their content area. One teacher told us, "I was born here. Raised here. And I still live here. I don't want to have to commute to another city to work." Another teacher we interviewed worked in the local high school as an aide for 3 years until a teaching position opened up. She noted, "I attended this high school, and when I went off to college I made a commitment to come back and teach here. I had to wait 3 years for a job, but when it opened up, I was ready."

In our statewide teacher survey, we asked those teachers who had a choice about where to teach the most important factors in choosing their current job. Consistent with our case study data, proximity to home was the highest-rated reason, followed by assignment and salary (Figure 4-1).

Figure 4-1

Factors Considered by Teachers in Choosing Their Current Jobs



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Understanding how teachers choose jobs underscores the challenge districts and schools face in attracting candidates; for example, there is nothing principals and administrators can do about the location of their schools and little they can do about the grade levels and content areas of their vacancies. Yet districts and schools go to extraordinary lengths to recruit teachers into their schools, as we discuss below.

District Recruitment and Hiring

In examining districts' efforts to recruit teachers, we were struck by the effect of teacher shortages on districts' strategies and practices and how the challenge to attract "good" teachers varies across different types of districts. In resource-rich districts—those that have few teachers to hire annually and many applicants—the focus is finding an appropriate match between the teacher candidate and the district or school environment. These districts have the luxury of being selective in their hiring. One suburban district we studied received more than 1,250 applications for 125 open positions. District staff base their hiring decisions on candidates' "passion, commitment, and willingness to go above and beyond their teaching duties" and describe hiring as a "marriage" where it is important that both parties desire the union.

Recruitment and hiring in hard-to-staff districts are completely different tasks. In some cases, there are not enough applicants with credentials—even applicants *without* credentials—to fill all open positions. For example, Los Angeles Unified School District needs more than 4,500 teachers each year and so is recruiting and hiring candidates year-round. These are the districts that have to be more aggressive in their efforts. And these districts can rely less on the local labor market and informal networks to provide enough candidates.

Recruitment and Hiring Strategies

Recognizing that the local community is the best source of new teachers, districts across the state—both hard-to-staff and resource-rich districts—rely on informal networks (friends, parents, in-laws, spouses who are working for the district in some capacity) to identify potential candidates. In fact, 45% of teachers found their teaching jobs through word of mouth (e.g., a friend or family member told them about an opening). Beyond this strategy, resource-rich and hard-to-staff districts have little in common with regard to recruitment and hiring.

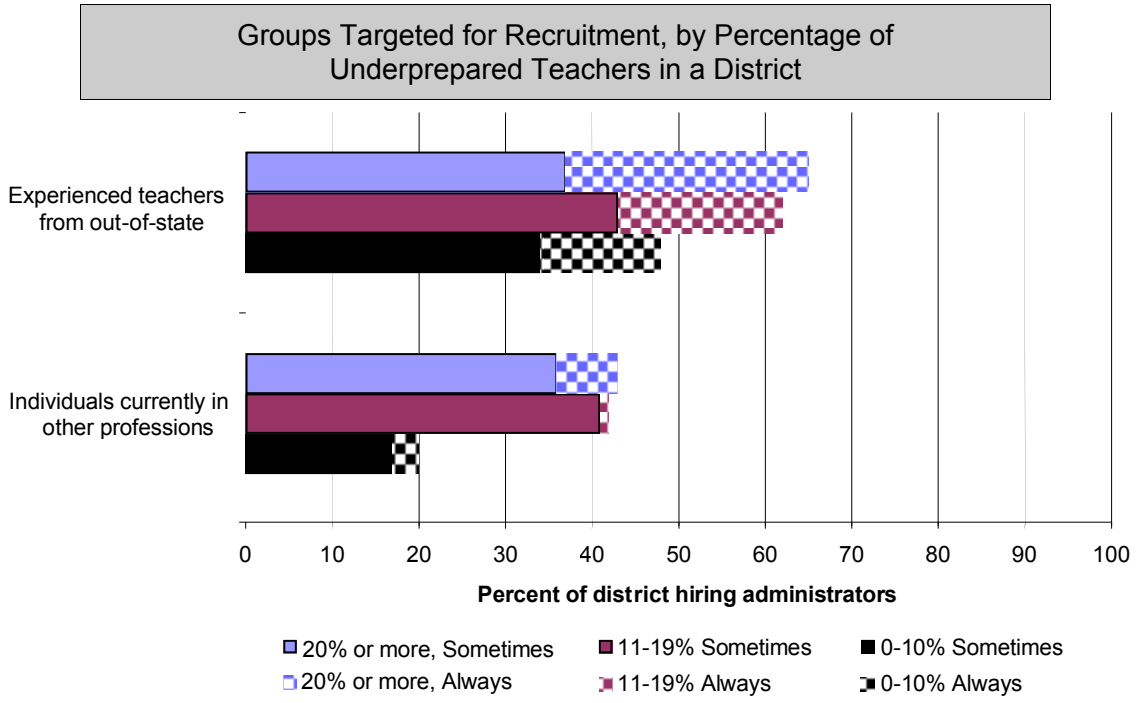
Where large pools of candidates exist, districts are able to rely on traditional recruitment methods, such as job fairs and advertisements at placement offices and in the local media. Further, districts are able to use intensive hiring procedures. For example, in one case study district, a teacher candidate will have six or seven interviews, starting with the principal and proceeding to the appropriate curriculum specialist, area superintendent, several assistant superintendents, and the superintendent. Candidates that progress to this final interview are also required to conduct a demonstration lesson for the superintendent.

In contrast, districts experiencing severe teacher shortages must use more aggressive recruitment strategies to address the daunting challenge they face of filling many open positions. Administrators in hard-to-staff districts more frequently use a variety of recruitment strategies than do administrators in resource-rich districts. One hard-to-staff district sent "letters of intent to hire" to students in the local blended teacher preparation program before they graduated, offered on-the-spot contracts at job fairs, recruited out of the state and country, relied on recruitment videos, used Internet-based media such as CalTeach and EduTech, advertised at local movie theaters, held an annual Teacher Interview Day, and offered signing bonuses. Hard-to-staff districts are more likely than resource-rich districts to make employment offers before positions are open. One-third (33%) of the hardest-to-staff districts (20% or more underprepared teachers) use this strategy, compared with only 12% of resource-rich districts (0% to

10% underprepared teachers).[1] Similarly, although few districts offer signing bonuses, more hard-to-staff districts (7%) than resource-rich districts (1%) use this strategy.[2] Importantly, resource-rich districts are not as aggressive as hard-to-staff districts in their recruitment strategies, nor is there a need for them to be aggressive.

Hard-to-staff districts also must rely on more varied sources of recruits than resource-rich districts (see Figure 4-2). Hard-to-staff districts are more likely to recruit and hire experienced teachers from out-of-state and individuals in other professions.

Figure 4-2



Source: SRI Survey of District Hiring Administrators (2001).
Note: See Appendix B for statistical information.

One case study district recruited overseas in countries that have surpluses of experienced teachers. This district hired 19 teachers from Spain, 15 from Mexico, 7 from Puerto Rico, and 10 from the Philippines, among others. The personnel director in another district noted:

> Each year in March we estimate the number of new hires we will need, based primarily on past year's attrition rate because at that time of year we rarely know who's leaving and who's staying. Then we travel to the Midwest while there is still snow on the ground. We go to the big state universities with pictures of California. If the candidates look good, we have them fill out applications and hire them on the spot. We have no idea what school they will be in—in fact, we are not even certain that we will have a job for them. But if we wait around, I can guarantee they'll be gone by the time we are sure we need them.

Districts administrators and principals also will bend procedures to recruit highly desirable candidates. For example, one district with a stringent set of steps for candidates to follow will forgo these procedures and offer on-the-spot contracts to hire minority candidates. Another district that struggles to find good candidates lured a career changer, a former professor of archaeology, by working with him to find a mutually agreeable place in the salary schedule. He said that this district "was very welcoming. They were willing to pay me for my education and experience. I was able to start at 1F, the far end of the first level, rather than start from year 1." This same district hired a special education teacher from Canada who was turned down by neighboring districts. She required a work visa and, in her words, "This was the only district that would deal with immigration."

Principals also play a critical role in recruitment and hiring. Principals in hard-to-staff schools describe attending graduation at local schools of education to scout for candidates, calling local college graduates when they are home from college, and getting recommendations from their emergency-credentialed teachers who are taking classes. One principal we interviewed traveled to Texas to recruit Teach For America trainees for her school. In one inner-city school we visited that had a high number of English language learners, the principal had learned that getting the "right" teachers for his school was his responsibility:

> The district does a great job of recruiting, and they always send me plenty of good candidates—except for my bilingual classes. For those, I have to do the recruitment. I use my contact in the community and with local university folks to find possible candidates. Then I do what it takes, including helping them get work visas, so that I can get fluent Spanish speakers in those classrooms.

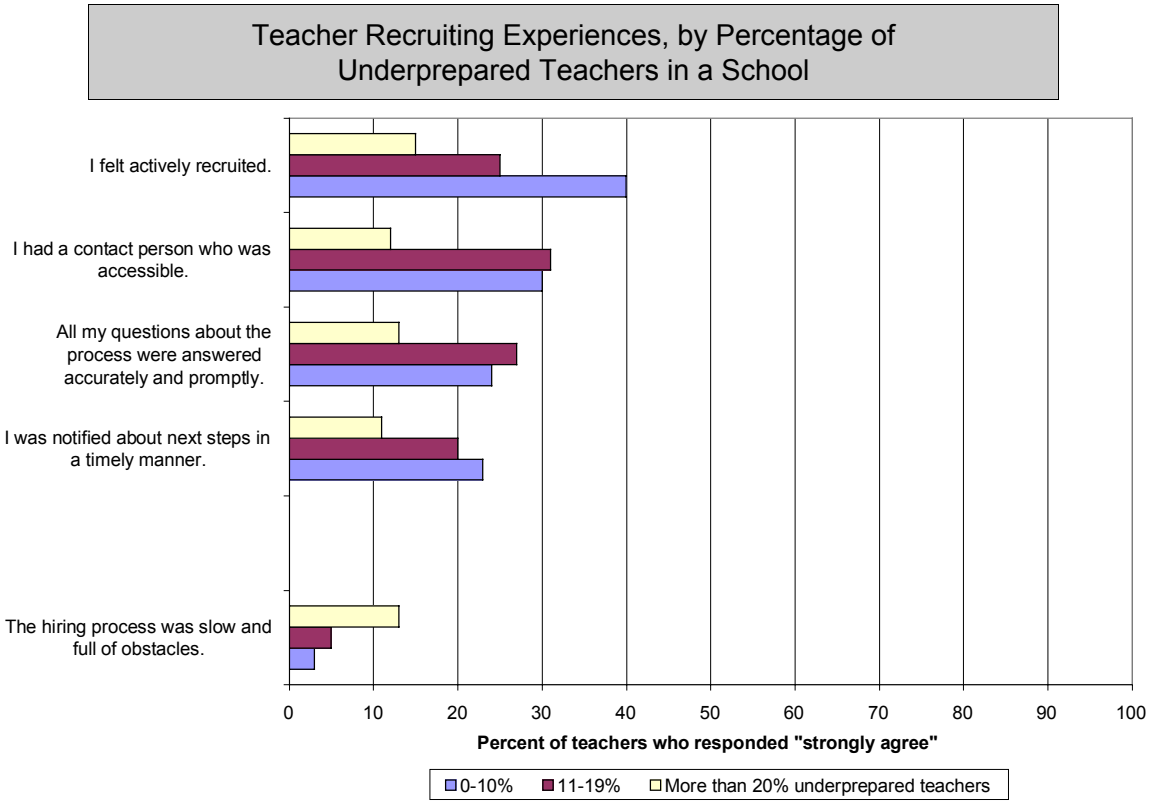
Hiring Barriers

Hard-to-staff districts are sometimes criticized for causing their own problems—particularly when, because of overly bureaucratic hiring procedures, qualified candidates end up accepting jobs in other districts that are able to hire more quickly.[3] Certainly, we found examples of such problems. Teachers who experienced problems with the hiring process were quick to criticize the difficult process. In one urban district we visited, teachers complained about a lengthy 15-page application. Processing their application, transcripts, credentials, and other requirements, such as fingerprints and physicals, require multiple visits to the central office with long periods of time spent sitting in a waiting room. Disorganization often results in process mistakes. One teacher we interviewed was required to have two physicals because of a mix-up. In another notorious case, the human resources department lost the new superintendent's fingerprints. Districts with difficult hiring processes can often lose potential candidates. One teacher told us that she gave up on a district after calling with a simple question and being put on hold for more than two hours. This teacher decided to teach at a neighboring district that answered her questions promptly and seemed much more competent and professional. A teacher in another district knew a candidate who did not hear from the district for 2 years. When the district finally contacted her, she already had another job.

In looking at the results of the teacher survey, overall, teachers did not have positive reports about their recruitment experiences, although only a minority of teachers reported the process to be slow and full of obstacles. Not surprisingly, there were some differences between teachers' experiences in hard-to-staff districts and resource-rich

districts. Teachers in the hardest-to-staff districts were less likely to feel actively recruited, have an accessible contact person, get accurate and prompt answers, and be notified about next steps in a timely manner. Whereas only 3% of teachers in schools with low percentages of underprepared teachers reported that the hiring process was slow and full of obstacles, 13% of teachers in schools with high percentages of underprepared teachers reported these problems (see Figure 4-3).

Figure 4-3



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

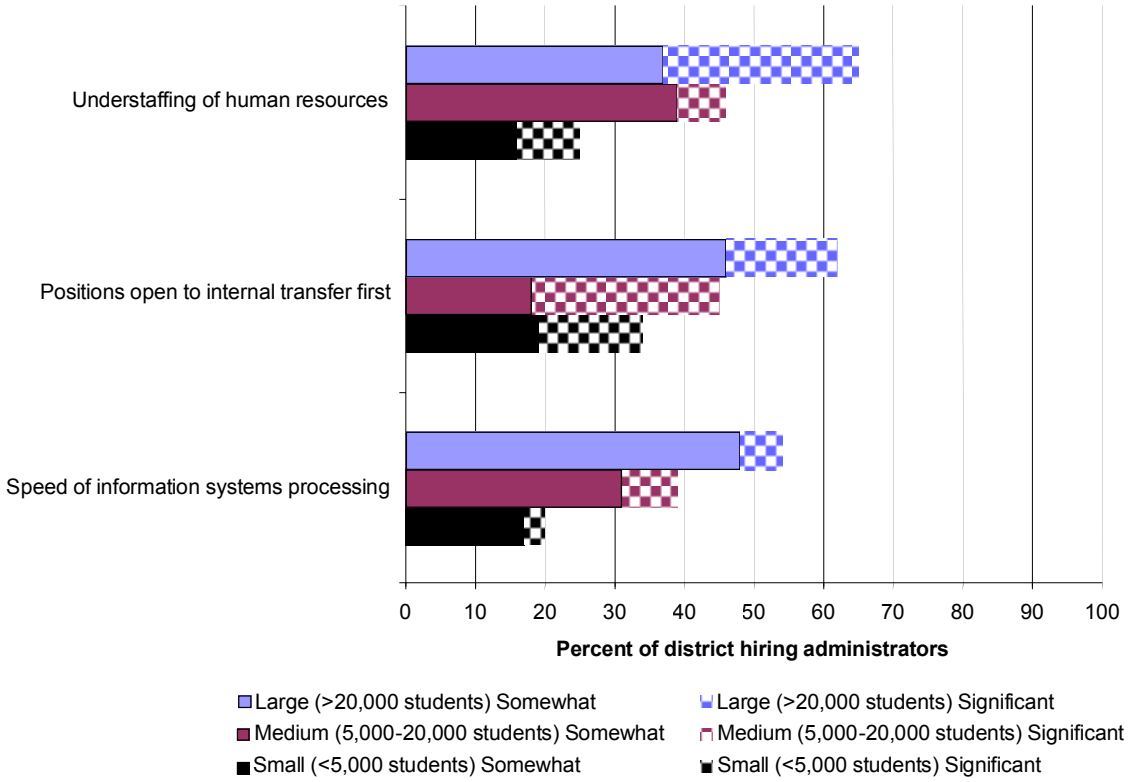
Differences between hard-to-staff and resource-rich districts are not surprising, given the large variation in the scale of the recruiting and hiring task at hand. In interviews in hard-to-staff districts, administrators frequently cited timing issues, often related to collective bargaining, as a frustrating barrier to hiring. Requirements about teacher retirement notification and internal transfer rights can limit districts' ability to recruit, retain, and place qualified teachers in a timely manner. For example, in one case study district, teachers do not need to notify the district about their impending retirement until June 30. Consequently, the district does not know the number or location of openings until many of the best teacher candidates have been hired elsewhere. Other issues raised by administrators include understaffed human resources departments and the slowness of the information systems to process applicants.

When we examined the survey data from district administrators, the key differences were related to the size of the district. That is, administrators in large urban districts

were more likely to report that they had to deal with these kinds of bureaucratic and managerial problems than were their counterparts in medium-sized and small districts (Figure 4-4).

Figure 4-4

Extent of Barriers to Hiring Teachers, by Size of District



Source: SRI Survey of California District Hiring Administrators (2001).
Note: See Appendix B for statistical information.

These data suggest that districts can do more to improve the functioning of their recruitment and hiring efforts. District administrators are aware of these problems and, in general, were trying to fix them. One case study district revamped its human resources department to be more service oriented toward teacher candidates. It streamlined the application process, requiring only a four-page application. Further, it developed an on-line process for every step of the application procedure. This not only makes applying easier, it also enables candidates to track the progress of their application. Staff are available to answer questions in person or by phone, and candidates are kept informed about the status of their application.

We should emphasize that the existence of bureaucratic obstacles in some districts cannot fully explain the maldistribution of underprepared teachers. Two districts can follow the same procedures and end up with very different results, depending on their attractiveness to candidates. For example, the statewide teacher survey revealed no significant difference between hard-to-staff and resource-rich schools regarding the time teachers experienced between submitting an application and being contacted for an interview, how long after an interview they were offered a job, the point in the year offered a job, or when they were informed of their exact teaching assignment. From our case studies, we learned that districts deemed desirable by candidates can "get away with" late hiring. One district we visited consistently hires late in August and is able to hire high-quality teachers because of the district's desirability.

Assessing Recruitment as a Strategy to Alleviate Teacher Shortages

Across all sources of data, we found that districts are devising innovative strategies to recruit and hire new teachers. Although we found much room for improvement in some district practices, particularly in terms of processing paperwork, we found no cases of districts not working diligently to attract qualified candidates.

There are large differences, however, between those districts that have few job openings annually, lower teacher turnover, and less difficulty landing candidates once jobs are offered and the hard-to-staff districts in the state. Whereas the more desirable districts can afford to put their effort into finding candidates that best match their needs, hard-to-staff districts spend their effort on getting enough individuals to apply to meet their numeric needs. As we showed in Chapter 2 of this report, these districts continually fail in their efforts. Moreover, hard-to-staff districts cannot afford to use hiring practices that help ensure that teacher candidates will perform well in the classroom. For example, hard-to-staff districts cannot put candidates through multiple interviews or request demonstration lessons. One case study district that is having more and more trouble hiring recently waived a demonstration lesson as a required part of the application process because teacher candidates were going to other districts that did not require one.

It is too early to tell whether the state's investment in recruiting new teachers will alleviate the problems of these hard-to-staff districts. Many factors are in play. The state of the economy and the level of unemployment in the private sector are likely to affect future trends. As private-sector jobs become more scarce, teaching jobs could become more desirable. As districts with teacher shortages use their state funds to improve their recruitment and hiring procedures, they may be able to attract more qualified teachers.

However, the fact that large and shortage-plagued districts are already using aggressive recruitment strategies suggests some limits to recruitment as an instrument

for solving the shortage of qualified teachers willing to take jobs in these schools. Indeed, the data suggest that improved and aggressive recruitment is a necessary but insufficient step toward providing every child in the state with a fully qualified teacher.

Endnotes

[1] The following table presents the percentages and standard errors for the responses of district hiring administrators who reported making employment offers before actual positions were open, by percentage underprepared teachers in districts.

Percent underprepared teachers in district	Percent district administrators	Standard error
0% to 10%	12	0.03
11% to 19%	34	0.04
20% or more	33	0.02

N=238

[2] The following table presents the percentages and standard errors for the responses of district hiring administrators who reported using signing bonuses as a recruitment strategy, by percentage underprepared teachers in districts.

Percent underprepared teachers in district	Percent district administrators	Standard error
0% to 10%	1	0.00
11% to 19%	13	0.03
20% or more	7	0.01

N=236

[3] National Commission on Teaching and America's Future. (1996, September). *What matters most: Teaching for America's future.* New York: Author.

Part I. Policy Recommendations and Next Steps

In this first part of the report, we document the continued shortage of fully prepared teachers in California. Fourteen percent of the teaching force do not have a full credential—and half of all first-year teachers are hired before they complete their preparation. In areas of severe shortages—typically in schools serving poor and low-performing students—the systems for preparing and recruiting teachers have been severely affected. Teacher preparation programs in these areas are increasingly serving individuals who are already the teachers of record in some of the state's most challenging classrooms. Recruitment efforts reflect the urgent need to find someone to fill open positions.

Numerous policy initiatives have been undertaken in response to these problems. These include efforts to expand and streamline teacher preparation programs, increased support programs for underprepared teachers already in the classroom, and massive new programs to help districts and schools recruit new teachers. Importantly, a number of these programs focus on hard-to-staff schools and low-performing schools. Yet, as we move forward, the Teaching and California's Future Task Force argues for a redoubling of efforts. Below, we summarize the Task Force's recommended next steps to meet three overarching goals of the *Teaching and California's Future* initiative.

Every student will have a fully prepared and effective teacher.

- Narrow the allocation of resources provided by existing initiatives designed to attract fully qualified, effective teachers to hard-to-staff, low-performing schools to focus on schools in the lowest two deciles of the Academic Performance Index. In addition, provide strong and consistent support for all novice teachers in these schools and for the accomplished veteran teachers who are responsible for ushering them into the profession.

- Waive or reimburse licensure fees for those preparing to teach in the hardest-to-staff, lowest-performing schools, specifically those in the bottom two deciles of the Academic Performance Index.

- Include as part of the application and planning processes for the High Priority Schools Grant Program for Low-Performing Schools, Immediate Intervention/Underperforming Schools Program (IIUSP), and other low-performing-schools initiatives, the requirement that all participating local districts and bargaining units preparing for contract negotiations secure an analysis of teacher supply, demand, and distribution at the local level, and place this information on the agenda for discussion during the bargaining process. Any disparity in distribution of newly hired and underprepared teachers should be clearly identified and fully reported.

- Revise the reporting requirements for the annual district report card to include data on the percentage of underprepared teachers, by school site. This information is to be presented to the local board of education at a public meeting.

- Create an information system, based on a unique identifier for each teacher in the state, that integrates the diverse sources of data into a common database to allow for a comprehensive analysis of teacher development in the state. Organizational responsibility and accountability for the database will need to be established.

All pathways into teaching will provide high-quality preparation for each participant and reflect California's standards for what students and teachers should know and be able to do.

- Concurrent with the introduction of the new state credentialing system, and as a part of the regular accreditation process, require teacher preparation institutions to review and align their programs using the recently revised Standards for the Teaching Profession and the Student Academic Content Standards to ensure that teacher candidates are provided high-quality preparation regardless of the path they pursue.

- Expand the Governor's Teaching Fellowship Program to include support for up to 1,000 individuals currently holding emergency permits and who already have jobs in the lowest-performing, hardest-to-staff schools with the express purpose of significantly accelerating their professional preparation.

- Require, as an integral part of the application process for the High Priority Schools Grant Program for Low-Performing Schools, IIUSP, and other low-performing-schools incentive programs, an action plan statement focused on ensuring an equitable distribution of interns throughout each participating district. Strategies supporting the action plan should be designed to limit intern placement to 10% or less of the number of fully credentialed teachers in low-performing, hard-to-staff schools and guaranteeing adequate supervision and mentoring for interns so assigned.

- Target a greater share of existing teacher preparation resources at the institutional level to those campuses that have the highest retention rates and that also provide the highest numbers of candidates for low-performing, hard-to-staff schools.

Every district will be able to attract and retain fully qualified, effective teachers.

- "Sunset" existing California Education Code provisions for first-time emergency permits by 2006-07.

- As part of the application process for IIUSP, Teaching as a Priority Block Grants, the High Priority Schools Grant Program for Low-Performing Schools, and other low-performing-schools initiatives, require local districts to establish goals for eliminating hiring as teachers of record those with emergency permits in the lowest-performing, hardest-to-staff schools by 2007.

- Expand existing allowances designed to attract teachers certified by the National Board for Professional Teaching Standards to the lowest-performing, hardest-to-staff schools to include other experienced,

accomplished teachers who accept assignments in schools in the bottom two deciles of the Academic Performance Index. Establish criteria and extend eligibility for these incentives to locally nominated accomplished veteran teachers, including:

(1) Retired accomplished teachers recognized for outstanding contributions to public education who return to teaching and serve as support providers and mentors to novice teachers.

(2) Recognized accomplished classroom teachers who have a record of successful practice and who serve as mentors, as adjunct faculty in the school of education at a college or university, and/or as professional development providers in a state-, district-, or school-sponsored program.

Part II. Building and Maintaining the Strengths of the Current Teacher Workforce

Teaching and California's Future is committed to ensuring that all California teachers receive high-quality support and learning opportunities throughout their careers. A related goal is that all teachers work in safe and clean schools that are conducive to learning, have access to adequate materials, and have the guidance and support of a capable leader. If students are expected to learn to high standards, teachers must have ongoing opportunities to improve their professional practice and must be able to work in conditions that support that practice.

In this part of the report, we turn our attention to the degree to which these goals are being met in the state. We address two basic questions. Are teachers receiving effective induction support during their first years in the profession? Do teachers have access to high-quality professional development opportunities to improve their teaching? In addressing both questions, we examine the impact of workplace conditions on teachers' professional lives.

California policy-makers have done a great deal to support teacher learning. Virtually all new teachers receive some kind of induction support during their first years in the profession. The state continues to expand the nation's leading induction program, the Beginning Teacher Support and Assessment Program (BTSA), which serves more than 20,000 teachers annually. Over the past 2 years, policy-makers have strengthened the professional development system. In 2000, the Governor and the legislature developed the professional development institutes and expanded the Subject Matter Projects—both efforts to ensure access to high-quality professional development throughout the state. In 2001, AB 466 was passed to expand on these efforts and attempt to reach all teachers in the state by providing districts with incentives to invest more heavily in professional development for their teachers.

BTSA has demonstrated some promising results. Retention rates among BTSA participants are reportedly high. BTSA participants are far more likely to receive intensive and sustained support and are more likely to report benefits from that support than beginning teachers who do not participate in BTSA. Still, fewer than half of all BTSA participants report receiving the kinds of support and levels of intensity most likely to make significant contributions to their teaching.

Although there are numerous initiatives around the state to provide school-based, ongoing, content-rich professional development, the majority of teachers report little improvement in their learning opportunities. Fewer than one-quarter of teachers surveyed report that their professional development contributed "a lot" to their knowledge and skills in any way. Isolated workshops remain the most common learning opportunities; teachers report that few opportunities are sustained, with ample follow-up.

Finally, the most striking finding is that both induction and professional development initiatives have little chance of succeeding in the hardest-to-staff schools, which serve the state's neediest children. In these schools, the proliferation of multiple programs, poor working conditions, and the scarcity of accomplished teachers undermine efforts to help teachers learn. The large number of underprepared

teachers in these schools undertake their preparation, induction, and professional development simultaneously while teaching full-time.

5. Induction Support for New Teachers

Policy Initiatives in Induction

- Since the early 1990s, the state has supported a formal induction program for first- and second-year teachers. The Beginning Teacher Support and Assessment Program (BTSA) grew to become an $87-million program by 2000-01, serving nearly 23,000 beginning teachers.
- In 1998, the legislature passed SB 2042 (Alpert) calling for the implementation of a two-tier credentialing system that requires completion of a beginning teacher induction program in order to earn a professional (Level II) credential.
- Internship and pre-internship programs attempt to meet the preparation and induction needs of underprepared teachers.

Impact of Policy Initiatives

- Nearly all teachers report receiving some kind of induction support; approximately half of new teachers participate in BTSA.
- Overall, a minority of beginning teachers report receiving the kind of intensive induction support that they find most valuable.
- Beginning teachers participating in BTSA are more likely to receive frequent and effective support than those who receive induction informally or from another program.

Characteristics and Quality of Induction

- As overall BTSA participation has increased, participation is shrinking in some local BTSA programs in districts that have large numbers of underprepared teachers.
- In districts where a relatively large proportion of the workforce is hired every year, providing high-quality induction support is a much greater challenge than in districts with relatively small numbers of new teachers.
- Shortages of accomplished teachers to serve as mentors, especially in high-poverty, high-minority, and low-API schools, threaten the quality and effectiveness of induction programs.
- Districts with high numbers of underprepared teachers and growing shortages of accomplished teachers are likely to struggle with the implementation of new policies such as a new credentialing system.
- For the large numbers of teachers without full credentials, induction, professional development, and preparation occur simultaneously.

Compared with other professions like medicine, law, or engineering, teaching has a brief preparation period. As a result, it is during teachers' first years in the profession that they shape their attitudes, beliefs, and practices. Effective induction support can increase new teachers' skills and knowledge and has been shown to increase their retention rates.[1] With so many teachers beginning their work in classrooms before completing a preparation program, induction support becomes even more crucial.

Policy-makers in California have long recognized the importance of new teachers' first years in the profession. Since the early 1990s, the state has supported a formal induction program to serve primarily first- and second-year teachers. The Beginning Teacher Support and Assessment Program (BTSA) has grown to be the largest formal induction program in the United States in both the number of teachers in the program and the amount spent by the state to support it. More recently, the state has expanded both the intern and pre-intern programs, designed to simultaneously prepare teachers and support their induction into the profession.[2]

With the dual responsibility of improving teachers' skills and knowledge and of keeping teachers in the profession, much is expected from these programs. Teachers need significant support, especially in their early years when they often face both classroom management and instructional challenges. For the large numbers of new California teachers who enter the classroom before completing a preparation program, the task of improving their skills and knowledge is even more challenging. Similarly, the challenges associated with retaining new teachers are more difficult when teachers are not fully prepared. Thus, induction programs are a key element of any strategy aimed at alleviating California's teacher shortage and improving the overall quality of the state's teachers.

In the remainder of this chapter, we first review state policies related to induction and then present estimates of the incidence of participation in induction programs. Next, we describe induction programs—their nature, intensity, and impact—from the perspectives of new teachers, their support providers, and principals, and discuss the variation in local districts' capacity to launch coherent and high-quality induction programs. Finally, we summarize the central challenges that stand in the way of providing high-quality induction support to every new teacher in California.

State Support for Teacher Induction

California has made the most significant investment in the support of new teachers of any state in the nation. In 1992, the state legislature passed SB 1422 (Bergeson) to support the development of the Beginning Teacher Support and Assessment Program (BTSA). BTSA subsequently grew to become an $87-million program by 2000-01, serving nearly 23,000 beginning teachers. Table 5-1 shows the progression of funding and numbers of local programs and teachers served since BTSA's inception. The BTSA Interagency Task Force—consisting of members of the California Commission on Teacher Credentialing (CTC) and the California Department of Education (CDE)—projects that the number of local programs will increase to 150, and they will serve 29,616 teachers in 2001-02, when the budget allocation reaches $104.7 million.[3]

Table 5-1

BTSA Funding and Participant History

Year	Funding	Number of Programs	Estimated Number of New Teachers Supported
1992-93	$4.9 million	15	1,100
1993-94	$5.0 million	30	2,300
1994-95	$5.2 million	30	1,900
1995-96	$5.5 million	30	1,900
1996-97	$7.5 million	34	2,166
1997-98	$17.5 million	73	4,118
1998-99	$66.0 million	86	12,330
1999-00	$72.0 million	133	22,156
2000-01	$87.4 million	143	22,955 *

Sources: Bartell and Ownby (1994), CTC (1998), Mitchell et al. (2001), Santiago (2001).
**CTC (2001).* [4]

Subsequent legislation passed in 1997, AB 1266 (Mazzoni), established clear programmatic guidelines for local BTSA programs. AB 1266 required BTSA grantees to foster the skills described in the California Standards for the Teaching Profession (CSTP) and legislated a formative assessment of beginning-teacher performance aligned with the CSTP. In response to this directive, the BTSA Interagency Task Force formed a design team that developed the California Formative Assessment and Support System for Teachers (CFASST). More recently, CFASST Year 2 has been piloted and released. The CFASST system, used by all but 11 of the 143 BTSA programs in 2000-01, integrates the use of formative assessment tools with new-teacher support and with support provider training. The 11 programs not using CFASST had locally developed assessments in place prior to the implementation of CFASST; they are required to demonstrate that their assessment systems meet program standards and legislated requirements.

The importance of induction is reflected in more recent legislation that sharpens the focus on rigorous standards for the teaching profession. In 1998, the legislature passed SB 2042 (Alpert) calling for the implementation of a two-tier credentialing system with preliminary (Level I) and professional (Level II) credentials. As part of this two-tier system, SB 2042 established new minimum requirements for the professional (Level II) credential, including "completion of a program of beginning teacher induction."[5]

Local BTSA programs typically targeted their first- and second-year teachers, which meant that many programs served individuals with intern credentials, pre-intern certificates, emergency permits, or waivers. In 1999, the BTSA Interagency Task Force asked BTSA program directors to set a goal of serving only teachers with preliminary credentials by January 2000. Accordingly, local BTSA programs have been moving new teachers without preliminary credentials into internship or pre-internship programs.

New teachers on emergency permits or waivers are not supported by a state induction or preparation program, but concerted efforts are under way at the state and local levels to move all teachers with emergency permits and waivers into internship or pre-internship programs. Despite the lack of a formal state program for emergency permit holders, nearly all new teachers in the state report that they receive some kind

of induction support, such as an orientation program or support from colleagues and administrators, discussed in the following section.

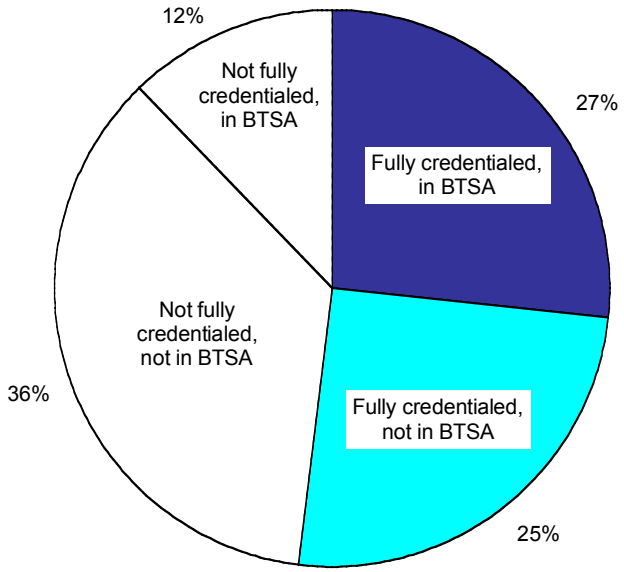
Induction Support for First- and Second-Year Teachers

Virtually all new teachers in California report receiving *some form* of induction support in their first or second year teaching.[6] Not all of these teachers participate in BTSA. Some receive induction support either informally or through a program other than BTSA, including local induction programs and state-supported intern and pre-intern programs.[7] Here we focus on who participates in BTSA and who does not.

Figure 5-1 describes the composition of the BTSA population of first- and second-year teachers.[8] In 1999-2000, there were 46,187 first- and second-year teachers in the state; 48% were underprepared, and 52% held a preliminary or clear credential.[9] As Figure 5-1 illustrates, BTSA served 39% of all first-and second-year teachers, including both fully credentialed and underprepared teachers.

Figure 5-1

First- and Second-Year Teachers, by Credential Status and Estimated BTSA Participation, 1999-2000



Sources: CDE (2000); CERC (2001); SRI analysis.[10]

It is striking to note that just over half of fully credentialed first- and second-year teachers were participating in BTSA in 1999-2000. With the state's goal of having BTSA programs serve only teachers with full credentials, we expect the number of underprepared teachers participating in BTSA to decline and the number of fully credentialed teachers participating in BTSA to increase.

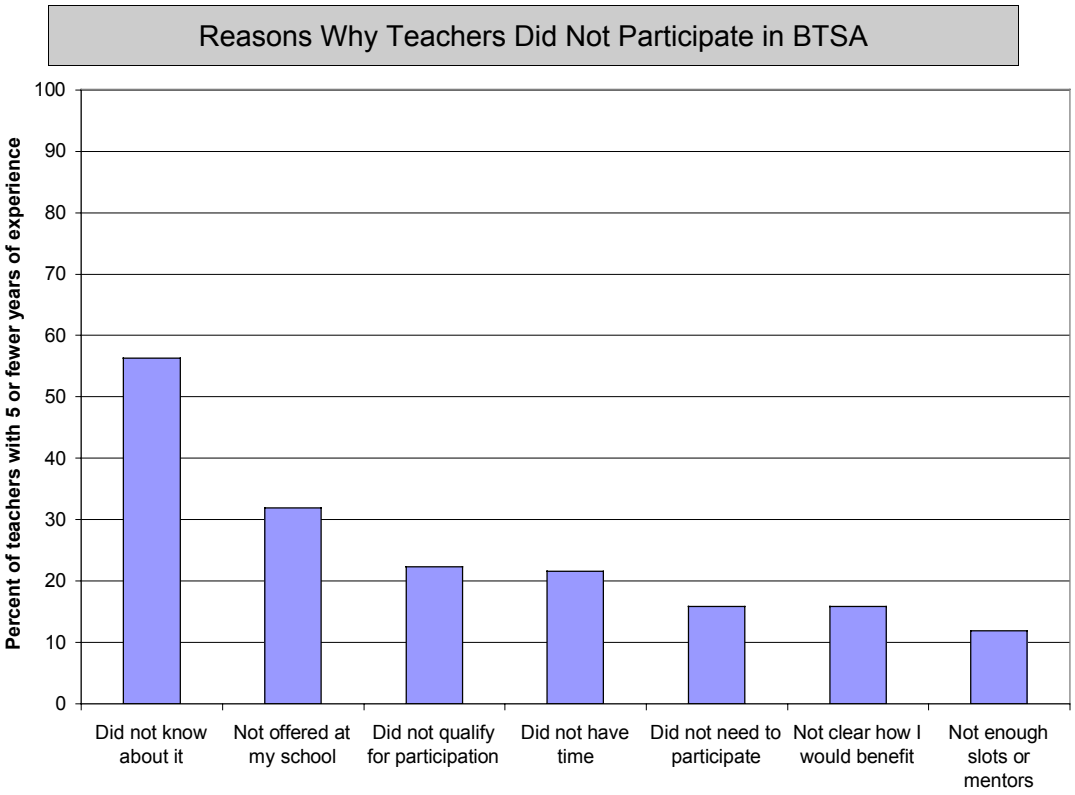
Nonparticipants in BTSA

Although the introduction of the state's new credentialing system will make participation in an induction program mandatory beginning in 2003, BTSA currently is a voluntary program. Of those who chose not to participate, the majority were second-year teachers. In 2000-01, about 7 out of 10 BTSA participants were in their first year.[11]

Teachers chose not to participate in BTSA for a variety of reasons. In our statewide survey of teachers, more than half of the respondents indicated that they did not know about the program, and 32% indicated that BTSA was not offered at their schools. These figures may be misleading in that it is possible that teachers were participating in BTSA-supported programs but did not know them as BTSA programs.

In some cases, teachers who opted not to participate in BTSA felt that the informal support at their school was sufficient. As Figure 5-2 shows, 16% of teachers with 5 or fewer years of experience who did not participate in BTSA believed that they did not need to participate because their schools provided enough support. In places that hired large numbers of underprepared teachers, nonparticipation often was attributed to a combination of "program fatigue" and a feeling that BTSA did not match their needs. By the time teachers were eligible for BTSA, they often had taught for several years while simultaneously completing their credential and were not eager to participate in a program designed for beginning teachers. The number of teachers who potentially fall into this category is substantial. In 2000-01, the state had 13,899 teachers without a preliminary or professional clear credential who had been teaching for 3 to 5 years, and 4,753 teachers without a full credential who had been teaching for more than 5 years.

Figure 5-2



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

The remaining reasons for nonparticipation reflect both the eligibility requirements (i.e., 22% reported that they did not qualify for the program) and the voluntary nature of the program (i.e., did not have time, not clear how they would benefit). Finally, the shortage of mentors, which will be further addressed later in this chapter, is reflected by the 12% who indicated that there were not enough slots open, based on the number of mentors available.

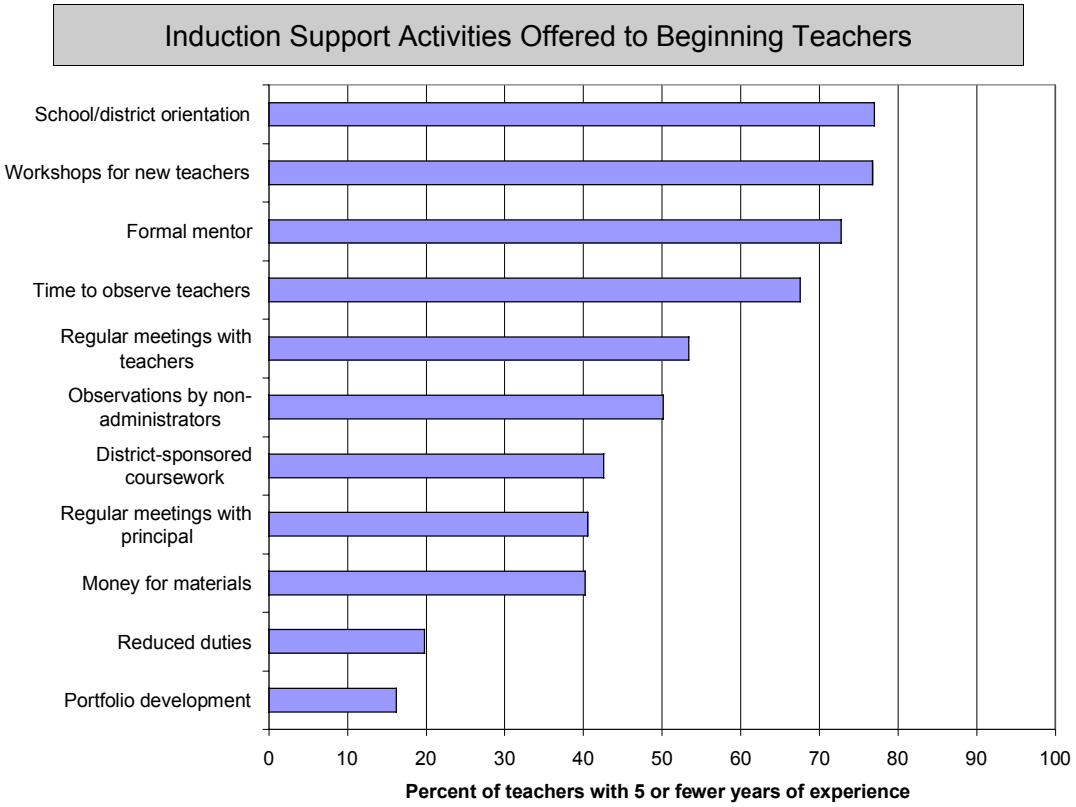
Nature and Intensity of Induction Support

The rapid rise in the number of underprepared teachers in the state has altered the state's plans to offer a high-quality induction program to all beginning teachers. BTSA was designed for teachers with preliminary credentials, not teachers who have not completed a preparation program. However, with half of new teachers lacking preliminary credentials, both the preparation and induction needs of new teachers in the state have changed. In this section, we examine the nature and intensity of new teachers' induction support, including both BTSA participants and nonparticipants.

The most common types of support reported by new teachers were (1) orientation sessions and workshops for new teachers, and (2) the formal assignment of an experienced teacher to provide mentorship (see Figure 5-3). Many new teachers were also given release time to observe other teachers, and about half of new teachers reported being observed in their class by non-administrators. Notably, both

participants in BTSA and nonparticipants reported receiving the same types of induction support.

Figure 5-3



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

New teachers also need opportunities to talk with their colleagues—both more experienced colleagues, including their principal, and new teachers who may share some of their early challenges. These opportunities to interact with colleagues create important learning opportunities and are critical strategies in establishing an open and collaborative professional culture. Across the state, however, only about half of new teachers reported having such opportunities with other beginning teachers and just over 40% reported having regular meetings with their principals.

Because there are many demands on first- and second-year teachers' time (e.g., preparing lessons and assessing the lessons' effectiveness, meeting with and observing colleagues, and, often, taking courses toward completion of a credential), some schools and districts reduce the duties assigned to new teachers. For example, a new teacher may be given an extra planning period or may *not* be asked to serve on a school committee. As Figure 5-3 shows, this type of support for new teachers is particularly rare. There are significant differences here by grade level. Only 3% of high school teachers reported reduced duties, compared with 23% of elementary teachers and 27% of middle school teachers.[12]

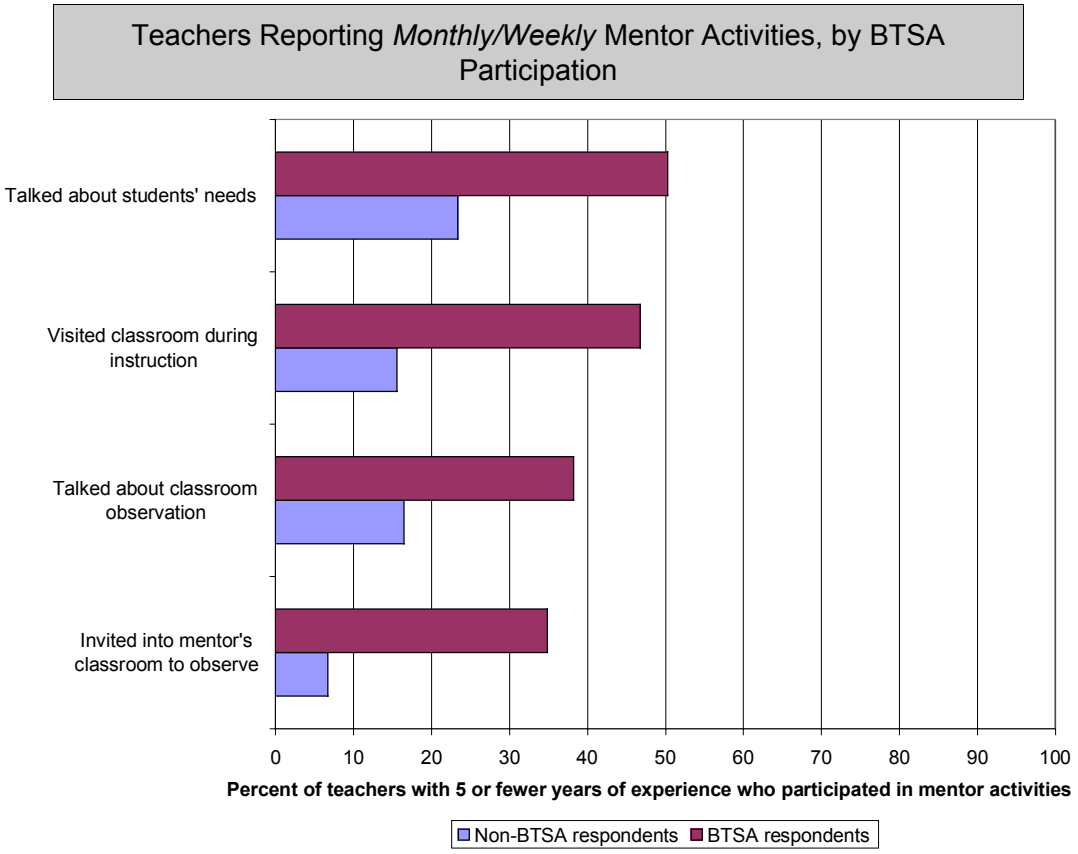
Mentor Support for New Teachers

Mentors are perhaps the most critical component of new teacher support. New teachers whom we interviewed attributed the quality of their induction support to the quality of their relationship with their mentors or support providers. In other words, the better their relationship with their mentors, the better their induction experience. As shown in Figure 5-3, most new teachers in California are assigned mentors. We also know that more teachers who were new to the profession in the last 2 years were assigned mentors (84%) than teachers who entered the profession 3, 4, or 5 years ago (64%).[13]

Teachers who were formally assigned mentors reported receiving a variety of types of support from their mentors. Overall, however, most new teachers did not report receiving mentor support very frequently. For example, few teachers reported that their mentors provided any one type of support monthly (or more frequently), and about half of new teachers *never* received several types of support (e.g., collaborative lesson planning, lesson demonstrations in the new teacher's classroom, and opportunities to observe the mentor teacher in his or her own classroom).

One of the primary foci of the BTSA program is to facilitate relationships between new teachers and their support providers through various program components, including CFASST, an Individual Induction Plan (IIP), or meetings between the beginning teachers and their support providers. Because of these structured activities, BTSA participants received support from their mentors much more frequently than those who did not participate in BTSA. For example, 47% of BTSA participants received classroom visits from their support providers monthly or weekly, as opposed to only 16% of teachers who received induction support in an informal or other program (see Figure 5-4).

Figure 5-4

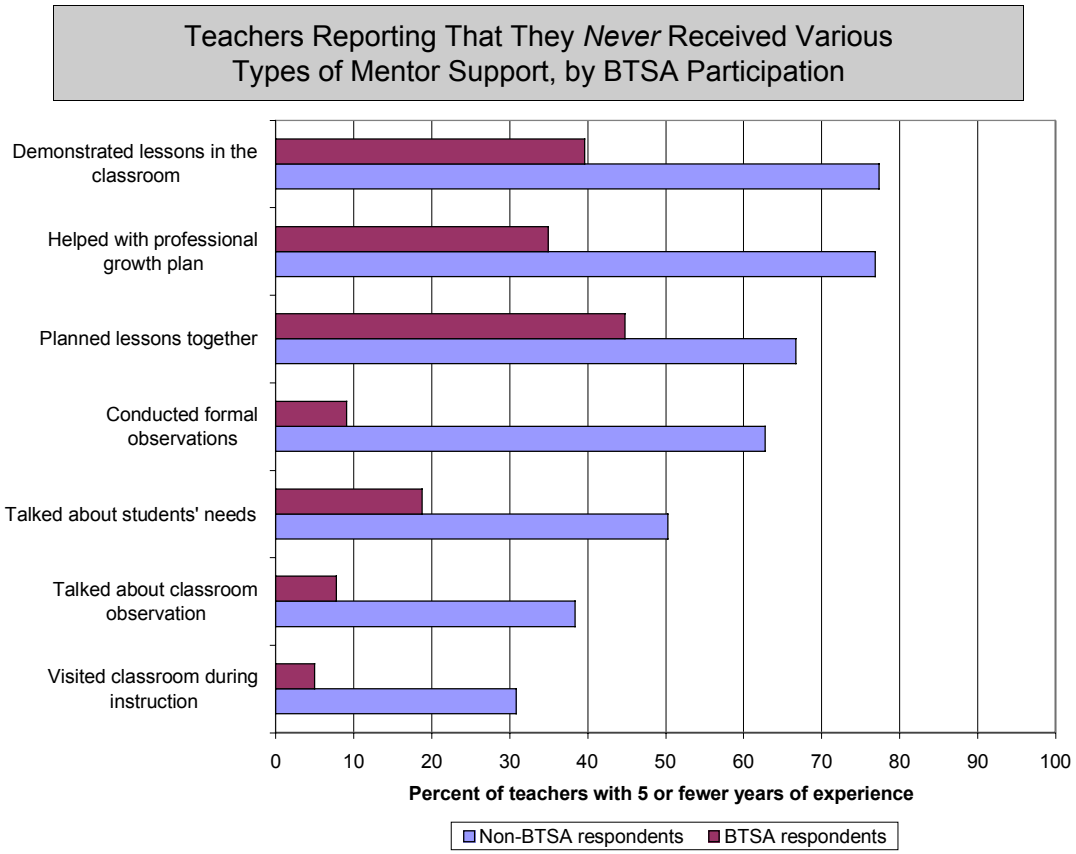


Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Further, BTSA participants were far more likely to receive weekly or monthly opportunities to talk about students' needs or a mentor's observation than non-participants. Although few teachers reported being invited to observe a mentor's classroom weekly or monthly (7%), BTSA participants were more likely to have such opportunities (35%). We found no statistically significant difference between the reports of BTSA participants and nonparticipants regarding the weekly or monthly frequency of some mentor activities, including working on a professional growth plan with a mentor or planning lessons with a mentor. However, BTSA participants were far more likely to receive these kinds of supports occasionally than were nonparticipants.

Although nearly all new teachers reported receiving some form of induction support, mentor activities were limited, particularly for teachers participating in non-BTSA induction programs. As Figure 5-5 illustrates, although nearly 40% of BTSA participants reported *never* having had lessons demonstrated for them in their classrooms, 77% of nonparticipants never received this form of induction support. In addition, smaller percentages of BTSA participants reported never receiving help from their support providers with a professional growth plan (35%) or with planning lessons (45%) than did nonparticipants (77% and 67% respectively).

Figure 5-5

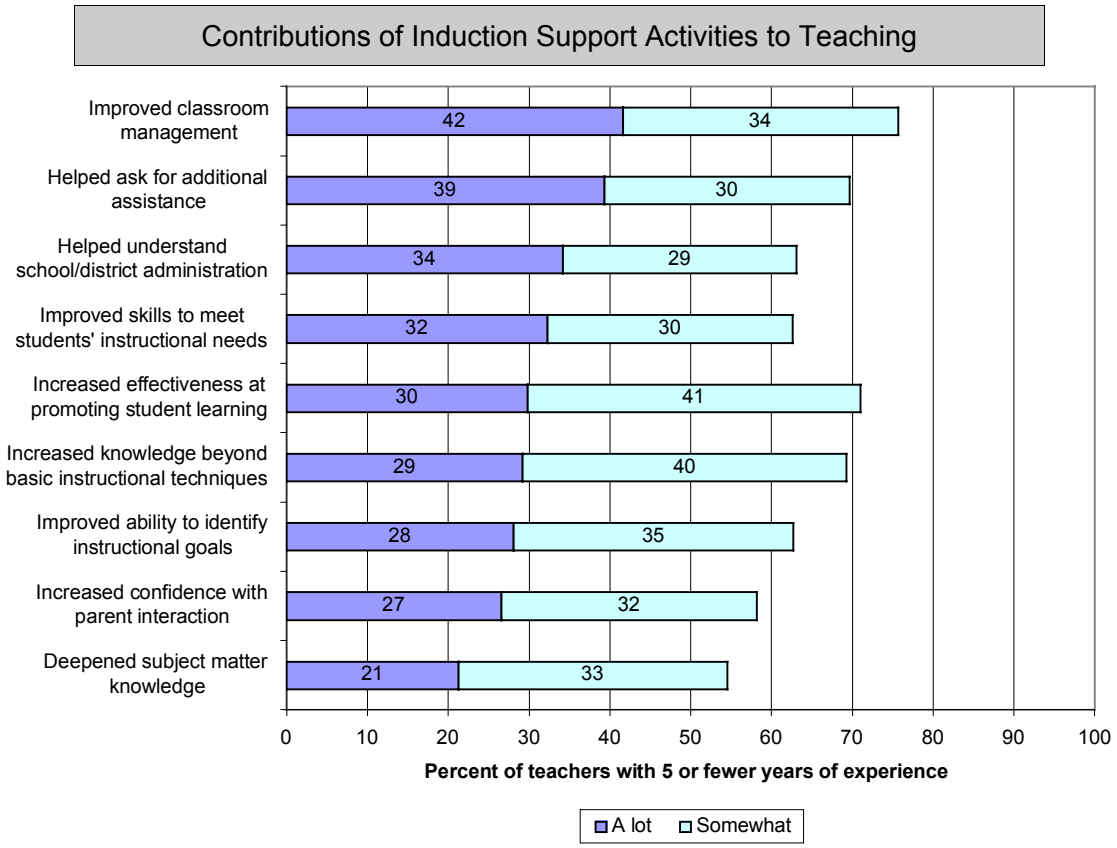


Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Impact of Induction Experiences

To what extent do these supports foster the skills, knowledge, and attitudes of new teachers necessary to retain them in the profession and help students reach standards? In our statewide teacher survey, teachers reported that their induction support was having only a moderate impact on them. Between 20% and 45% of teachers reported that the support provided to them during their first and second years contributed "a lot" in at least one area to their development as a teacher, and it helped them more in some areas than others. For example, support provided during the first 2 years most frequently contributed to teachers' classroom management skills; in contrast, induction support contributed the least to deepening new teachers' knowledge of the subject matter they teach (see Figure 5-6).[14]

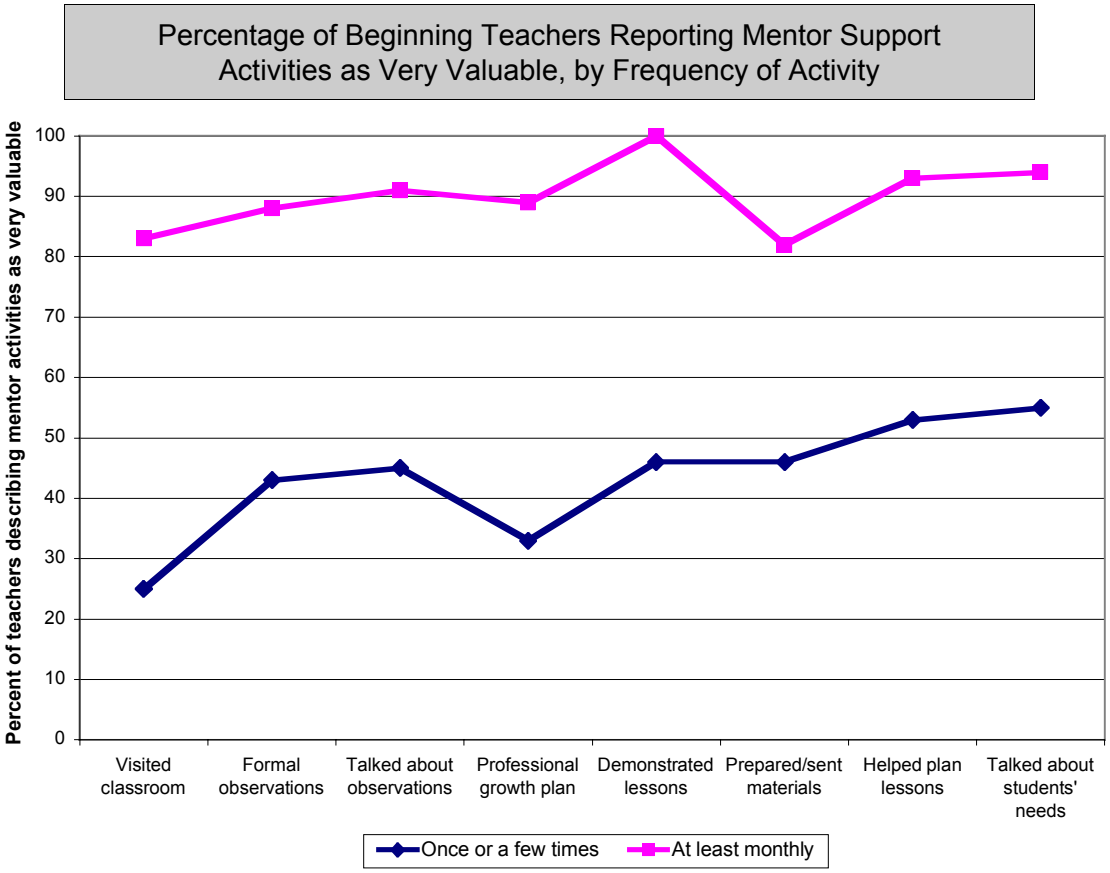
Figure 5-6



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

We also found that of those teachers who had mentors, the more frequently they received support from their mentor teachers, the more likely they were to report that their induction support contributed a lot to their work (see Figure 5-7). For example, 100% of those whose mentors demonstrated lessons at least monthly found the activity to be very valuable as compared to only 46% of beginning teachers who received the same type of support less frequently.

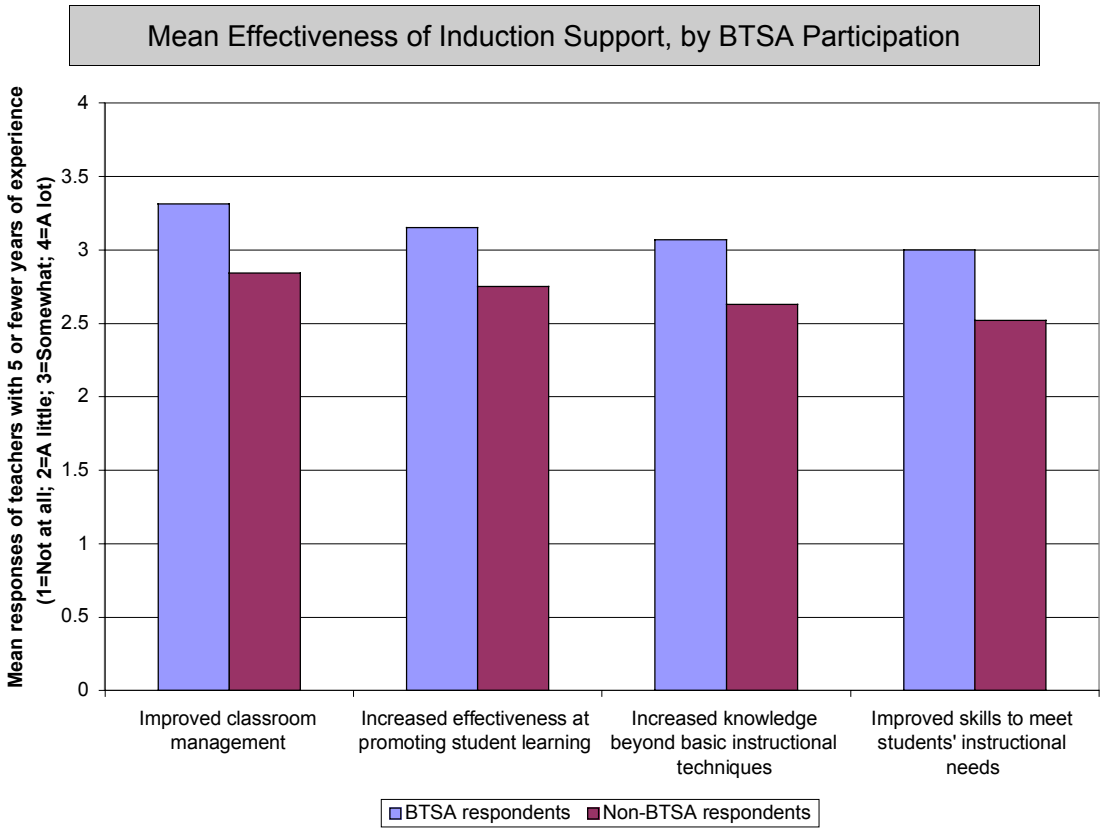
Figure 5-7



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Although we found the overall impact of induction support to be modest, in general, those who received more types of support reported a greater perceived impact than those who received less. In addition, teachers who participated in BTSA reported greater impacts from their induction than non-BTSA participants. Specifically, the support BTSA participants received was reported to be more effective in improving their classroom management skills, helping them promote student learning, improving their knowledge beyond basic instructional techniques, and helping them meet students' needs than those who did not participate in BTSA (see Figure 5-8).

Figure 5-8



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Overall, BTSA participants reported getting much more frequent support from their mentors than did non-BTSA participants. They also were more likely than nonparticipants to report that their induction support was more effective. Unfortunately, the non-BTSA participants include large numbers of underprepared teachers. These teachers are the ones who need the most support since they have not yet completed a preparation program. Although some underprepared teachers participate in intern and pre-intern programs, those who need the most help receive less overall induction support than do those teachers who have earned a preliminary credential.

Impact of BTSA on Teacher Retention

In addition to increasing teachers' skills and knowledge, teacher induction programs such as BTSA are designed to increase the retention rates of teachers. This purpose of BTSA is described in AB 1266 (Mazzoni, 1997), which asserts:

> The Legislature recognizes that the public invests heavily in the preparation of prospective teachers, and that more than half of all new teachers leave some California school districts after one or two years in the classroom. Intensive professional development and assessment are necessary…to retain greater numbers of capable beginning teachers. …[15]

Even as legislators recognize the attrition problem in many schools and districts across California, little is really known about statewide retention patterns. Indeed, the state lacks a data system that is capable of tracking the attrition of new teachers. However, collecting retention data has been an important element of local-level BTSA program evaluations, and, as of 1998, local-level programs were required to include retention data as part of their Program Implementation Plans. In the absence of a statewide database, we have to rely on uneven reports from local programs. One recent analysis of local program reports estimated a 93% retention rate among BTSA participants during their first year.[16] Thus, most teachers who were participating in BTSA in 2000-01 remained in their jobs during that year. Because this analysis did not include a comparison group, however, we do not know whether that figure is lower or higher for nonparticipants. Other research has demonstrated that induction programs can lead to increased retention among participating teachers.[17] Until California establishes a statewide data system that can track the state's teachers, policy-makers will have to hope that these promising outcomes of induction programs hold true for the whole state.

Despite the promise of induction programs like BTSA to increase teacher retention, a variety of factors, such as workplace conditions, strong principal leadership, and school culture, combine to affect teachers' decisions to stay in the profession. Next, we examine those conditions that enhance effective induction programs.

Beyond BTSA: Conditions for Effective Induction

Our case studies revealed that workplace conditions, local leadership, and school culture can either limit or enhance the promise of BTSA and other induction programs. In districts where there are only a small number of new teachers every year, and where both veteran teachers and administrators feel responsible for assisting new teachers, new teachers reported receiving high levels of support from their colleagues.

The story of one young teacher underscored the importance of multiple sources of support. As a new teacher who recently completed a highly regarded teacher preparation program, Michael was involved with the district's BTSA program. He had a support provider—an experienced teacher from the district—who visited his classroom once a week, observing his teaching and offering advice and suggesting strategies. The monthly BTSA meetings were less useful, although Michael enjoyed meeting with other new teachers on a regular basis and sharing stories. He also found value in the three annual formal evaluation observations conducted by his vice principal, whom he found insightful and whose comments were useful to him. He appreciated the fact that the principal of the school and his department head tried to "protect" first- and second-year teachers from taking on too much, including extracurricular duties. Perhaps most of all, Michael valued learning from the veteran teachers in his department.

> It's been great to have the really experienced teachers around. They are wonderful. They're not tired or cynical. They are just so intelligent and so knowledgeable. The most helpful thing to me has been to have people around who have been willing to help me and support me. The state can't force people to do that, but when it does happen, when it's part of the school culture as it is here, it's wonderful…I've had a pretty good year…I come to school happy, and I leave school happy, and I don't know how many people in different jobs have that. It's a great feeling that I hope stays with me.

Michael's story underscores at least four key factors that combine to provide a successful induction into the profession. First, Michael was well prepared before taking on the responsibilities of the classroom. Michael's preparation actually made him better suited to induction support, since he did not need assistance with the basics of teaching. Second, Michael received significant support from administrators who viewed the support of new teachers as a central part of their jobs. He was given release time to observe other teachers and benefited from the visits of veteran teachers and administrators to his classroom. Third, Michael was fortunate enough to take his first teaching job in a school where veteran teachers worked to create a positive school climate. In such a school climate, teacher learning was seen as linked to student learning. Finally, Michael was protected from taking on too many extra responsibilities in his first year of teaching. Reduced duties combined with a generally positive working environment helped Michael have a very successful first year of teaching.

Michael's story illustrates the power of induction programs like BTSA to improve teaching and reduce attrition when they are accompanied by a healthy school climate. When the entire school community sees the induction of new teachers as part of its responsibility, new teachers receive consistent daily support even when their mentors are not available. Induction programs like BTSA are necessary but insufficient to bring new teachers into the profession; they must be accompanied by the creation of supportive school environments. However, in contrast to Michael's situation, not all new California teachers begin their careers in such supportive schools. Next, we turn to the challenges facing California's effort to provide effective induction support for all new teachers.

The Challenges of Providing Effective Induction Support for All Teachers

To a large extent, the statewide variation in the nature, intensity, and impact of induction support reflects the variation in local capacity to provide coherent, high-quality induction programs. As state support for induction programs has increased, districts have either built on existing programs or established new programs to support their new teachers. In many cases, these programs continue to develop and evolve in response to both local context and changes in state policy. During our visits to schools and districts, we found four challenges that often shaped the quality of local induction programs: scaling up the program, the concentration of underprepared teachers, workplace conditions, and the forthcoming two-tiered credentialing system.

Scaling Up Induction

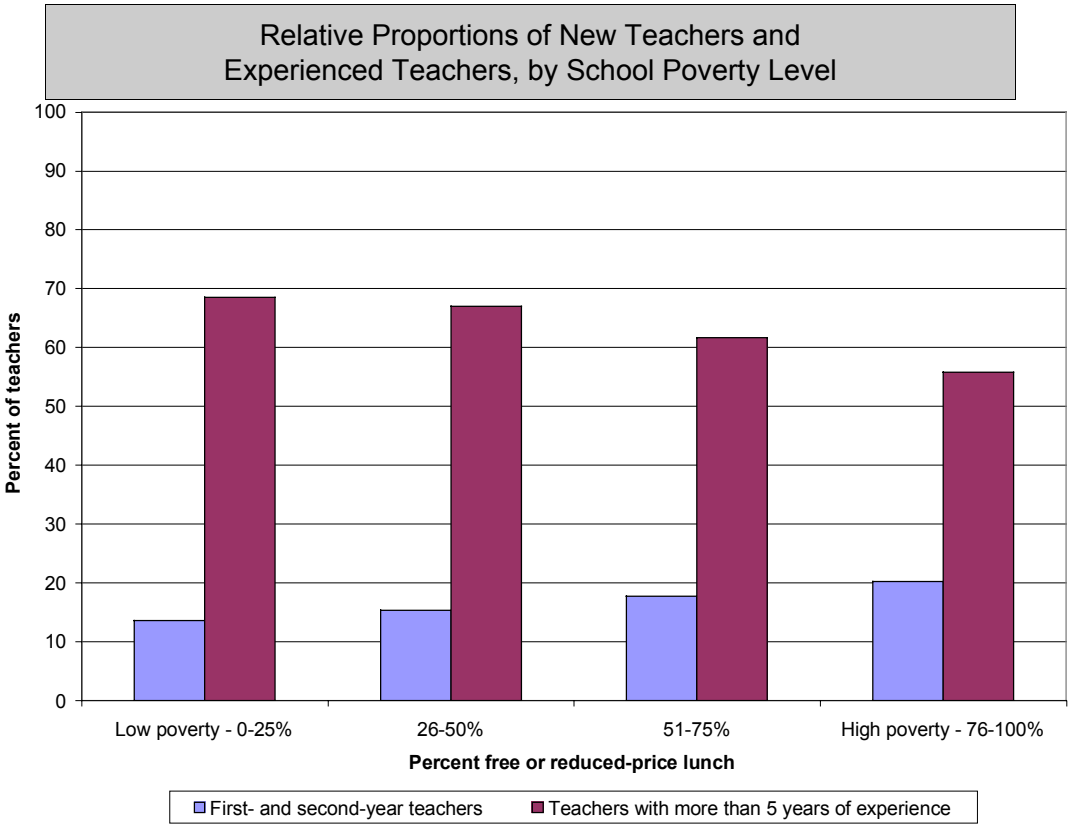
As local programs seek to take BTSA "to scale," that is to reach all new teachers with induction support, they face the challenge of maintaining program quality and finding a sufficient number of support providers. In those districts with relatively small and predictable numbers of new teachers, coherent induction programs have been established or expanded with few problems. As one BTSA trainer put it,

> Most of the programs seem to have a good system in place, so as quickly as they get new people on they get them linked up. There are some capacity problems in the outlying areas, but the majority have a 1:1 or 1:2 support provider to beginning teacher ratio. Some districts have had problems getting support providers, and sometimes the selection process is quick, so

the quality of the person may not be the highest, but overall the support providers that come for training are fairly good.

In contrast, other districts are faced with large numbers of new teachers every year. Managing the expansion of a program serving a large portion of the workforce is quite difficult. Supporting more new teachers means finding more veteran teachers to assist them. Finding these support providers is especially challenging in the schools where we have the most new teachers. Across the state, there are four teachers with more than 5 years of experience to every first- and second-year teacher, a seemingly adequate ratio.[18] But the distribution of potential support providers is uneven. Schools serving poor students, low-performing students, and minority students have a lower ratio of potential support providers to new teachers than other schools. For example, there are almost twice as many potential support providers to new teachers in low-poverty schools as in high-poverty schools (see Figure 5-9).

Figure 5-9



Source: CDE (2001).[19]

In these highly impacted schools, there are just not enough veteran teachers to go around. As one principal put it:

> As for the mentors, we are running out. There are just not enough support providers for all of the people who need support as a result of all of the new programs (e.g., mentor teachers, literacy coaches, new math initiatives; another one may come for ELLs). The pool of experienced people is going to shrink.

Within schools, new teachers are not evenly distributed across the grades or subject areas. In some schools, entire grade levels are staffed by new teachers. This situation precludes matching support providers with new teachers by grade level. At middle and high schools, content also becomes an issue. As one BTSA coach told us:

> Well, we're doing it. It's always hard to get coaches, but you do what you have to. One year, I found myself coaching a home economics teacher. You do what you have to do. We try to match content between coaches and new teachers. If we're real lucky, we do content and conference period coordination.

Even in schools with a reasonable ratio of veteran teachers to novices, we found that the more accomplished teachers were being asked to take on multiple leadership- and support-related tasks at their schools. A support provider in one school listed her

nonteaching roles: PAR mentor, BTSA support provider, Student Action Referral Team representative, Faculty Senate representative, color guard supervisor, and school play director. BTSA directors offered other examples of the burdens on experienced teachers:

> Qualified teachers who have always done the BTSA and mentor programs are doing other things. What's the priority at underperforming schools? Teachers are so stressed about standards and testing that they don't want to leave the classroom. If that's all [experienced teachers are] doing, support providers are okay. But they're being asked to do a lot of other things.

The expansion of the demands being placed on accomplished teachers is a direct threat to the further growth and development of induction programs and professional development efforts that rely on coaches. Many accomplished teachers we interviewed were overwhelmed and exhausted—so much so that it was difficult to conceive of asking them to take on any more responsibilities. The daily schedule of one veteran teacher tells it all:

> I get to school at 7 a.m. and the kids are already waiting for me outside my room. For the first hour I teach reading, then we have a 25-minute homeroom. Then there is a 15-minute nutrition break, but I use it to get supplies and make copies. I then teach four class periods, but we have a block schedule so I get one group for second and third period and another group for fifth and sixth period. I have the last period to take care of my responsibilities as department chair. You know, filling out order forms, moving supplies, etc. I also teach one class of sixth-grade science. I leave about 4:30. Until then, kids are in and they work in my room. I correct papers when I can then, but often I am at meetings. I have two regular meetings a week plus meetings that the district calls. I serve on one committee that is selecting new textbooks. So I usually have meetings 4 days a week. I spend from 6 to 7 on the phone with my mentees. I am helping six new teachers. I work from 7 to 11 correcting papers and planning. I have worked six of the last seven Saturdays at the school. I ran the science fair. I also held the student-led conferences for parents.

Districts that have a shortage of qualified, experienced teachers to serve as support providers find themselves in the position of having to either lower standards (i.e., selection criteria) or make trade-offs when they assign mentors to new teachers. Whereas some of the districts without shortages can screen their support providers, districts with shortages struggle to find anyone to do the job. "Anyone" can often be someone who is a recent BTSA graduate him/herself. As one second-year teacher put it:

> So, I was relatively much more well prepared than the other teachers. This year, we're able to give each other more support—as much as a second-year teacher can support a first-year teacher.

In one district with an extreme shortage of experienced teachers, the board passed a policy prioritizing each group of new teachers for the assignment of mentors. District interns get first priority, followed by pre-interns, then BTSA participants, and finally emergency permit holders. This order makes sense, given that the first three groups of new teachers are eligible for state-funded support, and, among those three groups, the district intern program is the largest and most expeditious route to a credential. The downside of this response to state policy and local conditions is that, because the

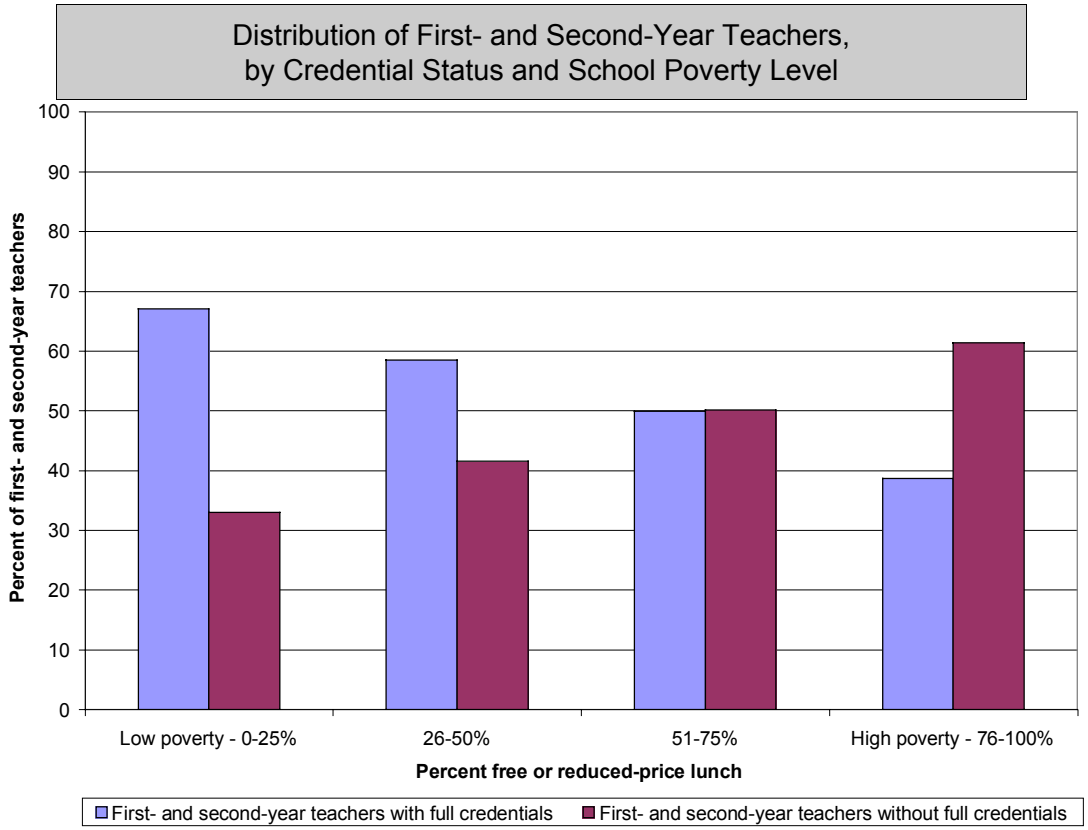
district does not have enough mentors to provide support to all the teachers in each of these groups, those teachers with the greatest needs get the least support.

The Concentration of Underprepared Teachers

Induction support becomes even more challenging in the hardest-to-staff schools—schools where the majority of novice teachers have not yet completed their preparation. These are schools where there are relatively few veteran teachers to support new teachers *and* where the majority of new teachers are underprepared. These schools are most likely to be serving poor, low-achieving students. As we show in Figure 5-10, more than 60% of first- and second-year teachers in high-poverty schools are underprepared, compared with 30% in low-poverty schools.

In these schools—and in districts with many hard-to-staff schools—creating a coherent support system for new teachers is difficult. BTSA, the formal induction program, is not targeted on nor designed for teachers who have not completed their preparation. In previous years, local BTSA programs typically tried to provide some kind of support for these teachers, but now program administrators are trying to find intern or pre-intern programs to support underprepared teachers.[20] As a consequence, participation in BTSA is actually declining in some hard-to-staff schools and districts.

Figure 5-10



Source: CDE (2001).[21]

Because districts with large numbers of teachers without credentials also have a shortage of support providers, they are forced to perform a kind of support triage. As an administrator from one district that suffers from a severe teacher shortage pointed out:

> What it appears for a district like mine is that the least-experienced teacher gets the least amount of support. BTSA support providers get $1,800 per beginning teacher; buddy teachers get $850 per intern. [The] pre-intern [program] pays for the Praxis, a substitute, and provides MSAT/Praxis preparation [and] survival pedagogy classes that include classroom management, parents, district assessments, and ELL students. They reimburse anyone who takes the test. But there is no funding for the district to step in and do any more. BTSA is not effective because we can't reach as many people.

The state's learning-to-teach continuum sounds reasonable on paper, but for teachers who travel the emergency route to teaching, the system seems fragmented and support seems haphazard.

Workplace Conditions

Perhaps the most daunting challenge is the urgent need to improve working conditions for all teachers and learning environments for all children in the state. Overcrowded school buildings, large and impersonal schools, difficult assignments, extra responsibilities, overwhelmed leadership, and poor compensation are familiar circumstances facing far too many California teachers. All of these workplace conditions are particularly difficult for beginning teachers, as they try to learn how to teach and cope with the seemingly insurmountable obstacles to their success and their students' learning.

Beginning teachers are affected by poor working conditions in a variety of ways. When they take positions in California schools, new teachers go to work in school facilities that range from being well maintained and well equipped to being poorly maintained, ill equipped, and astoundingly overcrowded. For overcrowded schools that have had to move to year-round schedules, the shorter year and the longer teaching day limit the opportunities that support providers have to work with beginning teachers.

New teachers in overcrowded schools were more likely than their experienced colleagues to "rove" from classroom to classroom. In multitrack elementary schools, this might involve changing classrooms each month or two as teachers go on and off track. In secondary schools, it may mean keeping your instructional materials in a shopping cart and moving from classroom to classroom each period of the day as other teachers' classrooms free up. Importantly, there are schools that make efforts to protect their new teachers from these adverse workplace conditions. For example, one multitrack elementary school had a rule that new teachers would not rove and provided incentives such as a parking space and no lunch duty to experienced teachers who volunteered to rove. Of course, having any teacher rove places an extraordinary burden on the teacher and places the teacher's students at a disadvantage.

School size is also a factor in workplace conditions, and large schools can undermine the effectiveness of BTSA. In our case studies, it was hard to see how BTSA could operate effectively in 2,200-student elementary schools, 3,600-student middle schools, and 4,600-student high schools. BTSA appeared to work best when the entire school culture embraced the idea of inducting beginning teachers into the profession. Although these extremely large and impersonal schools struggled to establish that kind of supportive school climate, by and large they did not succeed.

School principals play a crucial role in creating a school climate that is conducive to supporting new teachers. If the school principal does not or cannot create such a workplace environment, induction support for new teachers is likely to be uneven. Unfortunately, in large, overcrowded schools and in schools with large numbers of emergency teachers, the school office is reminiscent of an emergency room in a hospital. In these cases, principals are so busy performing triage that it takes an extraordinary leader to shape the school climate. With many programs and even more crises, BTSA can look like just another funding stream, one more thing to do.

Another workplace condition that undermines a strong induction program is the system of teaching assignments for beginning teachers. New teachers often find themselves assigned to the most difficult classrooms and undesirable schedules. Common practice is to make assignments on the basis of seniority. The result in some elementary schools, for example, is that new teachers are assigned to an upper-grade

class with 35 students, while their experienced colleagues opt to teach at the grade levels with reduced class sizes. In some secondary schools, new teachers reported having more classes to prepare for each day than their more experienced colleagues; this was especially true if the new teacher was hired after most courses had been assigned. New teachers also reported being assigned to classes that they did not feel prepared to teach. For example, one new high school science teacher we interviewed was assigned a "sheltered English" science course when she had not been trained in the instructional method, nor did she have more general knowledge about language acquisition.

It has become a truism that a teacher's first year is the most difficult one. Yet much can be done to make it easier—and there is evidence that some schools are taking steps to do so. We noted earlier that about 20% of beginning teachers reported having reduced duties. Although this is still a small percentage, it is more than double the percentage of beginning teachers who reported receiving reduced duties just 2 years ago. Similarly, some districts in the state on year-round schedules are beginning to take steps to make sure that beginning teachers are not all assigned to the least desirable tracks. Still, it remains common for the least experienced teachers to be concentrated on tracks least like traditional schedules—tracks filled with students with the greatest needs.

The Two-Tier Credentialing System: A Future Challenge

California is planning to implement a two-tier credentialing system by 2003. A key feature of this new system will be mandatory participation in an induction program. Although there is still much discussion about how BTSA will change as a result of its new status as a requirement for earning a Level II credential, some fear that it may lose its current emphasis on support. As one BTSA liaison at a partnership IHE put it:

> As you move from something that's voluntary to mandatory, how do you do that so that the spirit of the program is maintained? The sheer number creates challenges; you can't match new teachers and support providers for personality, grade level, teaching style, etc.

Perhaps of more concern is the capacity of districts to take on this new responsibility. In our case studies, we were struck by how few districts seemed aware of the implications of this new policy. Clearly, large districts will need to build up their capacity to manage their new record-keeping responsibilities, not to mention expanding BTSA rapidly to serve all newly certified teachers. These capacity issues are particularly troubling in large districts with large numbers of teachers without full credentials. Those districts will face the situation of requiring participation in an induction program for newly credentialed teachers who have already been working in a classroom for 3 years on an emergency permit.

If the two-tier credential system is to bring meaningful improvements to the quality of teaching in the state, steps need to be taken to ensure that participation in an induction program is more than a formality. Policy-makers should be alert to the unintended consequences of well-meaning reforms. The two-tier credentialing system holds great promise, but also possibly great peril if districts are overwhelmed with new credentialing responsibilities and teachers view induction as merely an additional hoop to jump through.

Conclusion

California leads the nation in its support of new teacher induction through its BTSA program. BTSA has gone from a relatively small program to a large and vital part of the state's strategy to improve the quality of teaching and reduce attrition. With the introduction of the new credential system, California will make induction support a mandatory part of learning to teach.

Even as BTSA continues to expand, it remains a program that, when developed in the right circumstances, helps improve beginning teachers' skills and knowledge. When compared with beginning teachers who do not participate in BTSA, BTSA participants are far more likely to receive intensive and sustained support and are more likely to report significant benefits from that support. Importantly, BTSA has established the curriculum and infrastructure necessary to expand and intensify the program for more beginning teachers. At the same time, BTSA programs will need to make significant improvements if all beginning teachers are to benefit. Fewer than half of all BTSA participants report receiving the kinds of support and levels of intensity most likely to make significant contributions to their teaching.

BTSA was developed before class-size reduction and before the explosion in the number of teachers without full credentials. As a program designed for fully credentialed teachers, it is becoming less relevant in districts with large numbers of underprepared teachers. This is becoming increasingly true as teachers without preliminary credentials are being moved out of the BTSA program. By the time underprepared teachers earn a credential, they may have been teaching for 2, 3, or more years, and may be reluctant to participate in a program for "beginning" teachers. Thus, in districts with large numbers of underprepared teachers, BTSA may never be able to meet the potential it has demonstrated in other districts.

The shortage of accomplished teachers poses another challenge for the continued effectiveness of BTSA. This shortage is especially severe in the poorest schools in the state. The combination of too many underprepared teachers, too few accomplished teachers, and the requirement that all teachers participate in a formal induction program may place the goal of effective induction for all California teachers out of reach. In many districts, the crisis of underprepared teachers is undermining the program crafted to serve new teachers.

Endnotes

[1] For a review of the research on induction programs and their impact on teachers' skills, knowledge, and retention, see Humphrey, D., et al. (2000). *Preparing and supporting new teachers: A literature review*. Washington, DC: US Department of Education.

[2] Neither the pre-intern nor intern programs are typically referred to as induction programs. However, these programs are working with teachers in their first years in the profession, supporting them to become better teachers. So, although the programs are clearly different from BTSA, they do provide "induction" support.

[3] The proposed increase of BTSA participants from 2000-01 represents the addition of teachers from seven new BTSA programs and from existing BTSA programs that submitted expansion plans to serve new teachers, and the addition of approximately 1,100 new special education teachers who will participate in the BTSA Special Education Pilot in 2001-02 [Santiago, R. (2001, June 20). *The Governor's proposed budget for Beginning Teacher Support and Assessment (BTSA) programs in 2001-2002 and the statewide expenditure plans.* Available online at http://www.ctc.ca.gov/aboutctc/agendas/july_2001/prep/prep3.html].

Senate Committee on Budget and Fiscal Review. (2001, August 1). *Final action report: A summary of the 2001 Budget Act (Chapter 106, Statutes of 2001).* Available online at http://www.sen.ca.gov/ftp/sen/committee/standing/bfr/reports/final_action_report.pdf.

[4] Bartell, C., & Ownby, L. (1994, December). *Report on implementation of the Beginning Teacher Support and Assessment Program (1992-94): Report to the legislature pursuant to Education Code 44279.2.* Sacramento: Beginning Teacher Support and Assessment Interagency Task Force.

California Commission on Teacher Credentialing (CTC). (1998). Personal communication.

Mitchell, D. E., Boyns, D. E., & Turk-Bicacki, L. (2001, April 24). *California Beginning Teacher Support and Assessment Program: The 2000 statewide evaluation.* Riverside, CA: California Educational Research Cooperative (CERC).

Santiago, R. (2001, June 20). *The Governor's proposed budget for Beginning Teacher Support and Assessment (BTSA) programs in 2001-2002 and the statewide expenditure plans.* Available online at http://www.ctc.ca.gov/aboutctc/agendas/july_2001/prep/prep3.html.

CTC. (2001, August). Personal communication.

[5] Education Code Section 44259(c)(2).

[6] Two years ago, we reported that 94% of teachers with 5 or fewer years of experience reported getting induction support; in our more recent survey, 98% of teachers reported such support. Unless otherwise specified, the sample of teachers we report on here includes those with 5 or fewer years of experience.

[7] It is also possible that, in some cases, teachers are participating in BTSA-supported programs but do not know them as BTSA programs.

[8] Other teachers, such as veteran teachers from other states or former underprepared teachers, are also BTSA participants but are not included in the figure because they technically are not first- or second-year teachers. Combined, these groups comprise as many as 20% of all BTSA participants.

[9] California Department of Education (CDE), Educational Demographics Unit. (2000). *Professional assignment information form, 1999-2000.* Sacramento, CA: Author.

[10] SRI calculated the estimates for this figure by using the annual survey data collected by CERC (2001) for the 1999-2000 school year. The response rate of beginning teachers for this survey was 61.4%.

CDE. (2000).

[11] CERC. (2001).

[12] The following table presents the analysis of the responses of teachers with 5 or fewer years of classroom teaching experience regarding the reduction of their duties as a form of induction support, by grade level.

Grade level of respondent	Reduced duties	No reduced duties	Row total
Elementary (K-5)	23.3%	76.7%	100%
Middle (6-8)	27.3%	72.7%	100%
High (9-12)	3.0%	97.0%	100%

Chi-sq: p=0.007, n=217

[13] The following table presents the analysis of the responses of teachers with 5 or fewer years of classroom teaching experience regarding the formal assignment of a mentor as a form of induction support, by years of experience.

Years experience of the respondent	Formal mentor assignment	No formal mentor assignment	Row total
2 or fewer	84.4%	15.6%	100%
3 to 5	63.8%	36.2%	100%

Chi-sq: p=0.038, n=212

[14] Efforts to increase the focus on content are under way (at least for those participating in BTSA). A new version of CFASST that focuses on the K-12 content standards and how to teach them was piloted in 2000-01 with second-year teachers.

[15] Education Code Section 44279.1(a).

[16] Briggs, D., Elliott, J., Kuwahara, Y., Rayyes, N., & Tushnet, N. (2001). *The effect of BTSA on employment retention* rates *of participating teachers.* San Francisco, CA: WestEd.

[17] Included in this analysis were the following studies, each of which have a sample size of at least 100 beginning teachers.

Odell, S. J., & Ferraro, D. P. (1992). Collaborative teacher induction. In G. P. DeBolt (Ed.), *Teacher induction and mentoring* (pp. 51-73). Albany, NY: State University of New York Press.

Blackburn, J. (1977). *The first-year teacher: Perceived needs, intervention strategies and results.* Paper presented at the annual meeting of the American Educational Research Association, New York. (ERIC Document Reproduction Service No. ED 135 768).

Colbert, J. A., & Wolff, D. E. (1992). Surviving in urban schools: A collaborative model for a beginning teacher support system. *Journal of Teacher Education, 43*(3), 193-199.

[18] CDE, Educational Demographics Unit. (2001). *Professional assignment information form, 2000-01.* Sacramento, CA: Author.

[19] CDE. (2001).

[20] Some districts have waivers and serve all their new teachers, regardless of credential status, via BTSA.

[21] CDE. (2001).

6. Professional Development

Policy Initiatives in Professional Development

- For more than a decade, California policy-makers have invested substantial resources in the professional development of teachers statewide.
- In 2000, the development of the California Professional Development Institutes and the expansion of the California Subject Matter Projects marked a new effort to scale up professional development opportunities to large numbers of teachers.
- Recent legislation, most notably AB 466, expands on these efforts and seeks to reach all teachers in the state by providing districts incentives to invest more heavily in professional development for their teachers.

Characteristics and Quality of Professional Development

- Survey respondents reported few improvements in their professional development opportunities between 1997-98 and 1999-00. Workshops remain the most common learning opportunities; few opportunities are sustained with ample follow-up; impacts on teachers' practice are moderate.
- There are, however, a number of examples of partnerships between the state and districts in which school-based coaches support teachers to improve their practice within the structure and schedule of the regular school day. Such efforts are limited primarily to early literacy.

Barriers to Developing a Coherent System of Professional Development

- Providing high-quality professional development to all teachers is complicated by uncoordinated mandates and programs, questions about who should control the opportunities teachers receive, the structure of teachers' work lives and the conditions in their schools, and the capacity of the system to support all teachers.
- These challenges are especially daunting in hard-to-staff schools, where the problems of multiple programs, poor working conditions, and low capacity in the veteran teaching staff relative to the schools' needs combine to work against providing reasonable learning opportunities for teachers.

Since the 1980s, California policy-makers have turned increasing attention to teachers' professional development. Beginning with the enactment of a state comprehensive professional development package in 1988 and continuing through the current year, the California legislature has made an increasing investment in programs aimed at developing teachers' pedagogical and content knowledge and skills. However, establishing coherent and effective professional development has remained elusive over the years.

Much has been written critiquing typical professional development offerings as short-lived and episodic, generic and content free, treating teachers as passive recipients of knowledge, overlooking the contexts in which teachers work, and ignoring teachers' prior experiences.[1] Our initial survey of teachers, conducted in 1998-99, confirmed that these generalizations rang true in California. At that time, for example, only about one-quarter of California teachers reported that their professional development was sustained over time, with ample participant follow-up and teacher support. Correspondingly, nearly half reported that their professional development was most often a series of single events with little or no follow-up. Only a third reported that their staff development often recognized and built on their knowledge and experiences, and fewer than half reported that their overall professional development experiences often promoted collaboration.[2]

Educational researchers have reported that more effective approaches to professional development focus on content, connect teacher learning to their experiences in school, foster collaboration rather than isolation among colleagues, support risk taking, consider teachers as professionals rather than as technicians, and pay attention to the context of teaching and teachers' experiences.[3] Consistent with these findings, our 1998-99 teacher survey found that teachers who frequently share student work, work together to develop curriculum materials, or observe each other's classrooms consistently report that their professional development experiences had a greater impact on them. Recent California legislation has attempted to create state-sponsored professional development opportunities that reflect many of these principles of effective staff development and increase the number of teachers participating in these programs.

In this chapter, we begin by reviewing recent state investments in teacher professional development. Next, we present survey and case study data to describe the implementation of state and district programs and the impact of these programs on teachers' knowledge and skills. Having documented the nature of teachers' learning opportunities, we examine the barriers to creating an effective system of professional development.

State Support for Professional Development

With the passage of SB 1882 in 1988, the state launched a series of broad initiatives to support teacher learning. These included site-level projects for planning and implementing professional development linked to curriculum, instruction, and assessment at about 300 selected high schools; Regional Consortia to help schools and districts strengthen their professional development programs; and Subject Matter Projects hosted by institutions of higher education to provide intensive content-based professional development. In 1997, the Reading Instruction Development Program earmarked funds for professional development in reading instruction, to be provided by state-approved professional developers. In 1999, ABX1 2 expanded the state's

efforts in reading with the establishment of the Reading Professional Development Institutes, focusing on reading instruction for grades K-3. In that first year, $12 million was appropriated by the legislature for training and participant stipends for 6,000 teachers. Participants were required to attend an intensive 1-week summer institute that was augmented by additional training and school-based assistance throughout the subsequent academic year. Priority for inclusion in the institutes was given to new or underprepared teachers in schools with low reading scores on the SAT-9.

In 1999, recognizing the many different professional development initiatives, the state sponsored the development of a set of clear guidelines—or design elements—for high-quality professional development. Known as the California Professional Development Reform Initiative, this effort resulted in the publication of a field guide to help shape professional development initiatives at all levels of the system from Sacramento to local schools.[4] More recently, policy-makers have called for the development of standards for the professional development of teachers and instructional leaders (AB 341, Strom-Martin).

In 2000, professional development institutes emerged as a key strategy in teacher development in California. Using the general frameworks of the Reading Institutes and the Subject Matter Projects, AB 2881 (2000) expanded the California Professional Development Institutes (CPDIs) in terms of the subject areas and grade levels addressed, and the number of participants to be served. The CPDIs were designed to provide participating teachers with intensive content-based professional development, tied to state standards, in mathematics, reading, high school English, and English language development. Appropriations for the CPDIs for 2000-01 totaled more than $61 million, and the program will serve more than 48,000 teachers.[5]

In 2000, the California Subject Matter Projects (CSMPs) also were increased in scope and funding. Administered by the UC Office of the President and housed on UC and CSU campuses, the California Subject Matter Projects provide intensive subject-matter-based professional development in writing, reading and literature, mathematics, science, history and social studies, foreign language, physical education and health, arts, and international studies. Traditionally, the CSMPs had worked "one teacher at a time." The 1998 reauthorization directed the CSMPs to move to a school team approach, with the explicit goal of effecting schoolwide instructional reforms. The majority (75%) of available participant slots also are reserved for teachers from schools at or below the 40th API percentile.[6] The CSMPs received an increase of $20 million to a total of $35 million in the 2000-01 budget, to expand the number of sites from approximately 100 to 170, serving a projected total of 25,000 teachers.

The concept of the professional development institutes was further refined in the most recent legislative session with AB 466. This legislation provides local districts with funds to support professional development in mathematics and reading for teachers, as well as for instructional aides and paraprofessionals who directly assist with classroom instruction. Essentially, the dollars allow the districts to purchase the services of the professional development institutes—or other approved providers. Like the professional development institutes, supported professional development is supposed to include at least 40 hours of intensive work (the institute) followed by 80 hours of support during the school year. The goal is to reach all teachers by prioritizing services to those who have not yet had the opportunity to participate in the professional development institutes. Districts then are to phase in additional teachers each year until all teachers are reached by 2005-06. Online learning opportunities are to

be made available, as well, to ensure that teachers who cannot attend professional development in person can participate.

The California Peer Assistance and Review Program (PAR) provides another form of professional development for new teachers and struggling veteran teachers. ABX1 1 (1999) established PAR, which seeks to create "a critical feedback mechanism that allows exemplary teachers to assist veteran teachers in need of development in subject matter knowledge or teaching strategies, or both."[7] PAR became fully operational on July 1, 2001, when it replaced the California Mentor Teacher Program. Funds received under PAR that are not used to support struggling veteran teachers may be used for BTSA, pre-intern programs, district intern programs, and other professional development. For 2000-01 and 2001-02, the PAR budget is $125 million per year.

The overall increase in state funding for professional development is intended to broaden the impact of state-sponsored professional development by enabling a greater percentage of the state's teachers to participate in these programs. The increased reliance on CPDIs, CSMPs, and similar district-supported professional development indicates a state-level commitment to support effective models of professional development. Designed to be sustained and content based, professional development offered under the auspices of these state programs is intended to create more meaningful learning opportunities for California's teachers than were available previously.

The Nature of Professional Development in California

The path from these state policies to individual teachers' learning experiences is a long and complicated one. It takes time for policies to result in changes in learning opportunities and then for those learning opportunities to reach a large number of teachers. For example, the University of California had to design and hold a competition for the professional development institutes. Then the winners of that competition had to hire staff and recruit teachers. Then those teachers had to attend institutes and participate in follow-up activities. Only at that point would we expect teachers to report meaningful changes in their professional learning opportunities.

Given that data collection for this study was going on as the major policy initiatives of 2000 were just being implemented, our data on them generally are restricted to the case study sites. The teacher surveys, administered in the fall of 2000, asked teachers about their experiences in 1999-2000, before a number of the initiatives were even in place.

Despite this limited time frame, the survey data do shed light on teachers' perceptions of their learning opportunities through spring 2000. The most striking finding from the survey is that teachers' overall descriptions of their professional development remain virtually unchanged from those in our initial survey inquiring about professional development in 1997-98. Teachers reported participating in a wide range of professional development activities, from traditional workshops to online curriculum, from district- or school-mandated activities to independent study. In both 1997-98 and 1999-2000, the most common forms of professional development were workshops offered by the school or district, regularly scheduled opportunities for collaboration with other teachers, and engagement in independent professional reading (see Table 6-1).

Table 6-1

Professional Development Activities Reported by Teachers

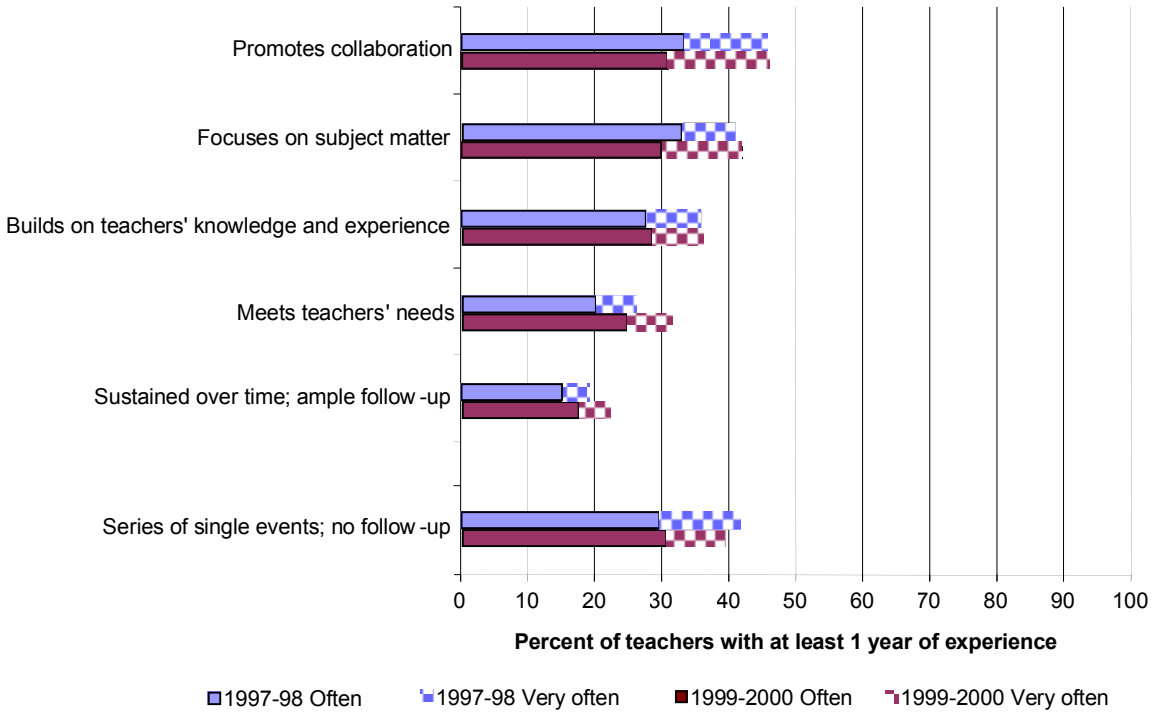
Activity	Percentage of Teachers Participating	
	1997-1998	1999-2000
Workshops by school staff	92%	94%
Workshops by outside consultants	87%	NA
Collaboration with other teachers	74%	76%
Independent professional reading	71%	76%
School or district committee	61%	66%
Professional association activities	47%	48%
Individual or collaborative research	37%	36%
University extension courses	29%	30%
California Subject Matter Projects	22%	19%
Graduate courses	18%	18%
Professional Development Institutes	NA	7%

Sources: SRI Surveys of California Teachers (2001, 1999).
Note: See Appendix B for statistical information.

Similarly, the characteristics of teachers' professional development did not change substantially from 1997-98 to 1999-2000. There was still a struggle to provide sustained support for teachers. For the 1999-2000 school year, only 23% of teachers reported that their professional development often or very often was sustained over time, with ample participant follow-up and teacher support. Correspondingly, 39% reported that their professional development often or very often was a series of single events with little or no follow-up (see Figure 6-1).

Figure 6-1

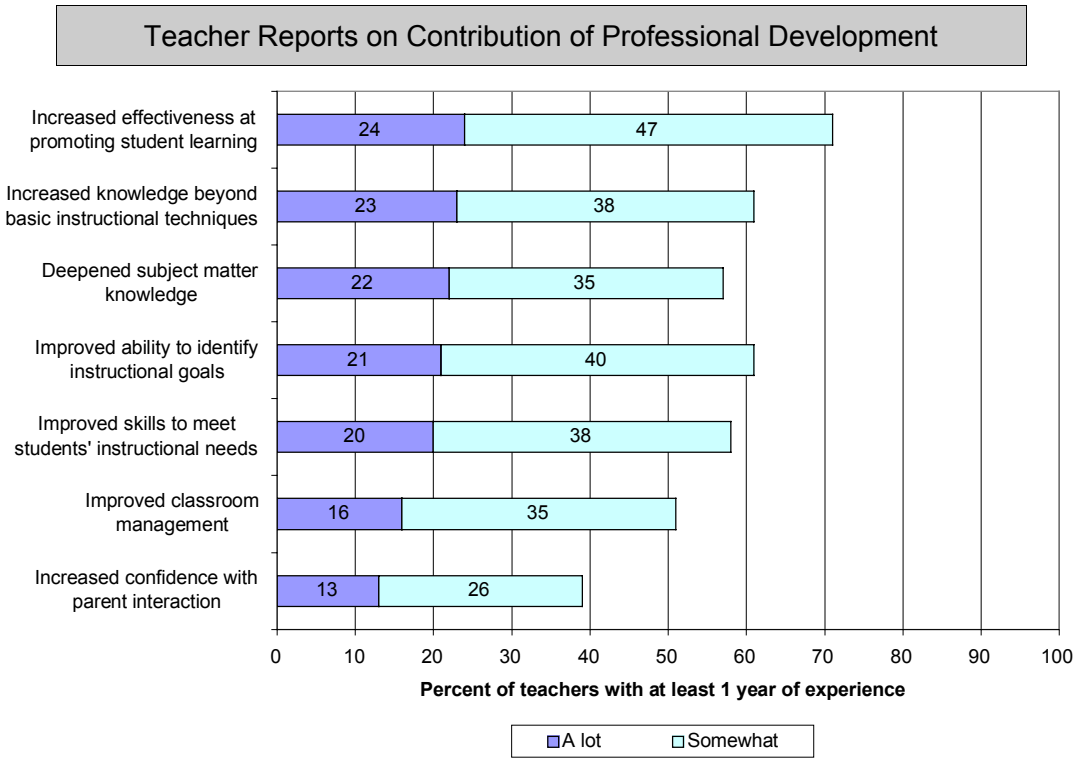
Prevalence of Certain Characteristics of Professional Development, 1997-98 and 1999-2000



Sources: SRI Surveys of California Teachers (2001, 1999).
Note: See Appendix B for statistical information.

When asked about the contribution that participation in professional development activities has made to individuals, teachers reported only a moderate impact. Fewer than one-quarter of teachers reported that their professional development contributed "a lot" to their knowledge and skills in any way. With a slightly lower standard of effectiveness, approximately one-third of teachers reported that participation in professional development contributed "somewhat" to their abilities. For example, only 24% of teachers reported that their professional development increased their effectiveness at promoting student learning a lot; however, 47% reported that their professional development increased their effectiveness somewhat. Whereas 23% reported that their professional development increased their knowledge beyond basic instructional and assessment techniques a lot, 38% reported that it increased their knowledge somewhat (see Figure 6-2).

Figure 6-2



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Although these impacts are moderate, some kinds of professional development have more impact on teachers than others do. Those teachers whose professional development recognizes and builds on their knowledge, promotes collaboration, is sustained over time, is not a series of single events, and meets teachers' needs in their current assignment reported that their professional development experiences had a greater impact on them. Similarly, teachers who collaborate with their colleagues by analyzing student work, developing teaching materials, and advising and observing each other reported a greater contribution of their professional development.[8]

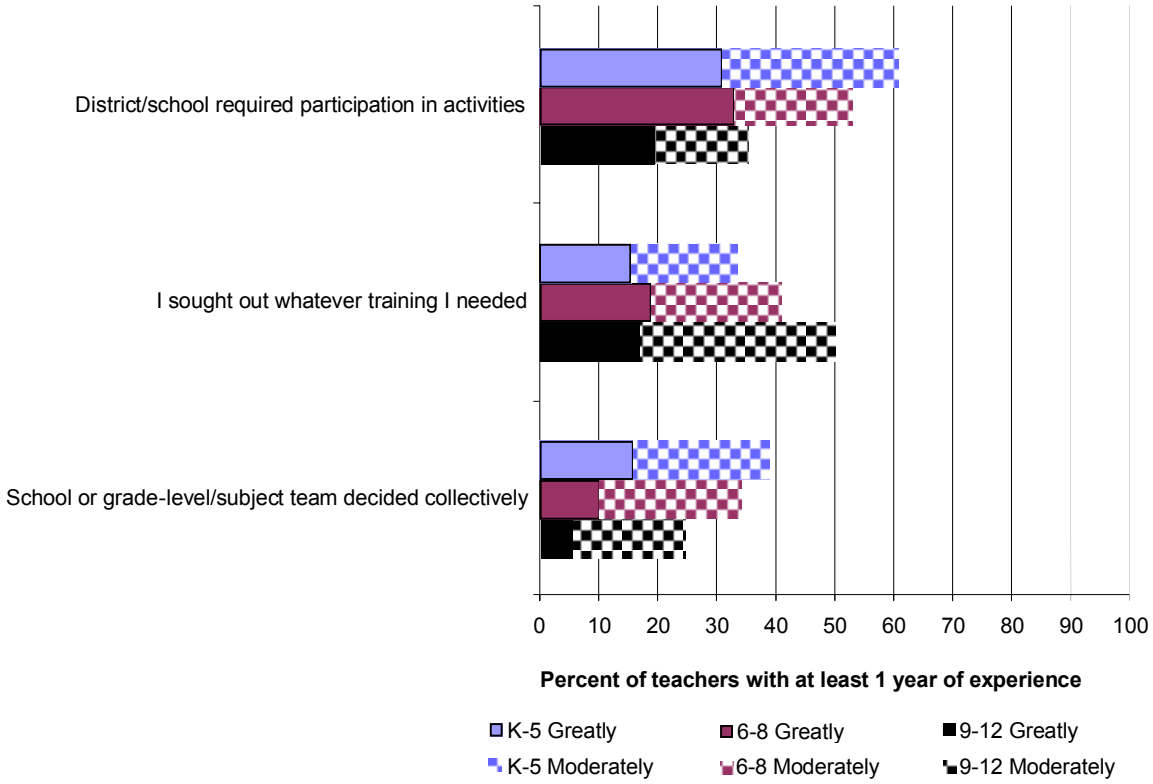
Differences in Professional Development for Elementary and Secondary School Teachers

Professional development for elementary and secondary school teachers varies considerably. This variation, in part, is due to differences in who is planning professional development offerings. Professional development for elementary school teachers tends to be planned centrally, by either the school or the district, and it is often mandated—and so it tends to be systematic. In contrast, professional development for secondary school teachers is rarely designed centrally and so tends to depend on individual teachers' efforts. Most high school teachers design their own professional development plan, selecting activities that they feel will meet their needs or interests. About three-fifths (61%) of elementary school teachers were required by their district or school to participate in specific professional development activities (e.g., about a newly adopted textbook or in a high-priority content area such as reading), compared with

slightly more than one-third (35%) of high school teachers. Conversely, half of all high school teachers (50%) reported that they sought out whatever training they wanted or needed outside of the district, compared with only one-third (34%) of elementary school teachers. With high school teachers' professional development based on individual interest and motivation, the coherence among activities depends on the individuals' choices (see Figure 6-3).[9]

Figure 6-3

Locus of Decision-making, by School Level



Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

Secondary school teachers reported less of a content focus in their professional development than elementary school teachers did, an unexpected finding given the subject-specific nature of their teaching assignments. Nearly one-half (47%) of elementary school teachers reported that their professional development often or very often focused on subject-matter content. In contrast, only about one-quarter (27%) of high school teachers reported a focus on subject-matter content.[10] Similarly, a significantly greater percentage of elementary school teachers reported participating in activities sponsored by one or more of the California Subject Matter Projects, which by design are grounded in subject-matter content. Nearly one-quarter (23%) of elementary school teachers reported participating in at least one of the CSMPs, compared with only 11% of high school teachers.[11]

There also are some small but significant differences in the quality of the professional development experienced by elementary and secondary school teachers. Despite teachers' assertions about the benefits of collegial work, secondary school teachers are more likely to work in isolation from other teachers in their schools. Twenty-nine percent of high school teachers reported that they often or very often worked with other teachers in their schools to develop teaching materials or activities for particular classes, compared with 42% of elementary school teachers.[12] Further, when considering the overall contribution that professional development has made to individuals as teachers, 28% of elementary school teachers reported that their participation in professional development increased their effectiveness at promoting student learning a lot, compared with only 17% of high school teachers.[13]

Differences in Professional Development across Subject Areas

The more coherent nature of elementary teachers' professional development may be due to the increasing emphasis on elementary literacy. In our case study districts, the intensive, sustained professional development programs were all in elementary literacy. The focus on literacy, however, has come at a price: the exclusion of professional development in other content areas. Several CSMP sites we visited reported an inability to fill all available slots in nonliteracy subject areas. At one site, for example, the History/Social Science Project accepts all teachers who apply yet rarely reaches its participant limit, despite the fact that teachers receive a stipend to attend. The Writing Project, in contrast, is "swamped with applications" and conducts interviews to decide whom to accept into the program.

There is a strong connection between what is part of the state testing program and what is emphasized in professional development. As one director of the CSMP History Project said, "Unfortunately, everything is test driven." Consequently, the system has few incentives to broaden professional development to include a systematic focus on other disciplines. With the state accountability system emphasizing literacy and mathematics, districts are responding by narrowing the focus of their professional development efforts. Through the API ranking system, with its sanctions and rewards, schools are being held accountable for student achievement in literacy and mathematics, as demonstrated by scores on the SAT-9 achievement test. In grades 2-8, the weights given to the content areas measured in the 1999 and 2000 API calculations were focused exclusively on mathematics and literacy: mathematics, 40%; reading, 30%; language, 15%; and spelling, 15%. In grades 9-11, the weights were somewhat more evenly distributed but still favored literacy: mathematics, 20%; reading, 20%; language arts, 20%; history-social science, 20%; and science, 20%. The high school exit exam is based solely on mastery of state standards in English/language arts and mathematics.

District Efforts to Bring Coherence to Professional Development

The statewide survey data suggest that the professional development experiences of teachers had not changed much through school year 1999-2000. Overall, professional development tended to be episodic and have only a moderate impact on teachers. However, our case studies, which continued through spring 2001, did show some movement at the district and school levels to change teachers' learning opportunities.

We have seen the greatest efforts in elementary literacy, increasingly through school-based coaches. Nearly all of our case study sites have implemented a coaching program in elementary literacy. Where the literacy program is well defined, resources are streamlined, and mentors are available and well trained, coaching is a promising model for professional development. It is site based, relevant to teachers' needs, and part of the everyday work in schools. In other words, it reflects several of the principles of effective staff development. San Diego offers one such example of a promising coaching model, illustrated below.

A Comprehensive Professional Development Strategy at the District Level

San Diego has implemented an intensive districtwide coaching program to develop and refine teachers' literacy instruction. The district has assigned one school-based staff developer to each elementary school, and an additional staff developer to each of the lowest-performing schools. Four days per week, staff developers provide whole-school professional development, visit classrooms, model lessons, and provide individual support to teachers. All teachers receive additional instructional coaching from principals, who spend a minimum of 2 hours per day in classrooms, and teachers in the lowest-performing schools work with a literacy expert, who provides literacy instruction with the regular classroom teacher each morning.

San Diego staff developers and principals receive their own professional development in literacy and coaching techniques to maintain their content expertise and ensure their effectiveness in working with other adults. Staff developers have a full day of training each week, and principals attend an all-day training session each month.

To supplement the direct coaching, San Diego offers a series of professional development courses over the summer, open to all San Diego teachers. Further, teachers working at the district's summer school program provide instruction in the morning and learn how to work with struggling students in the afternoon.

Other districts have reorganized their administrative structures to better direct the professional development that teachers receive in their early years, coordinated various funding streams to avoid fragmentation of their professional development offerings, and established partnerships with local universities and other organizations to foster consistent messages about good teaching. Long Beach Unified School District is one example of such a district.

Reorganizing a District to Foster Coherent Professional Development

Long Beach Unified School District has developed a coherent teacher development system in which support is available to all teachers, from emergency permit teachers to nationally board certified teachers. Coherence within the district stems from (1) a district reorganization that brought all administrators working on pieces of professional development under a single umbrella, (2) a purposeful coordination of various funding sources, and (3) strong partnerships with CSU Long Beach and other local organizations.

LBUSD's 5-year professional development plan begins with a New Teacher Institute prior to the beginning of the school year, and follow-up training throughout the school year. During the first and second years, teachers receive mentoring provided by a New Teacher Coach. New Teacher Coaches spend 1 hour per week with each new teacher working through a series of structured activities in targeted discipline areas. During the third and fourth years, elementary and secondary teachers continue to participate in differentiated professional development. By year five, LBUSD expects its teachers to participate in advanced content institutes, pursue additional degrees/credentials, and/or begin the process for obtaining national board certification.

Even where districts struggle to provide high-quality professional development, there are pockets of strong school-based programs. Typically, these schools have strong leaders who act as gatekeepers for the whole school's professional development. Such leaders bring more coherence to their teachers' professional development experiences by carefully screening the kinds of activities offered. Most importantly, these leaders know their teachers well and tailor professional development to match the needs of the individual teachers. One teacher we interviewed described such a leader:

> We are considered one of the best schools in the district. We have better SAT-9 scores than other schools in the district. This is because of the principal who has really challenged every teacher. She provided us with the necessary training. She is immersed in how we are going to improve. She is the model. Not an administrator who works on the leaky faucet. She knows her staff. She taps the right person for the right job. And she gives every teacher a chance to excel. Most importantly, she encourages all teachers to improve academically and professionally by providing incentives.

This leader also rejects the narrow definitions associated with preparation, induction, and professional development. In her school, almost 40% of teachers are underprepared, and she assumes the burden of training them as "something we have to do." Over the years, she has been creative in using a variety of funding streams to create differentiated learning opportunities for all of her teachers. More recently, however, the struggle to maintain control over teacher learning has become more difficult. As she explained:

> We were very effective when we determined our own course. In the last few years, it has been year after year of external decisions. We get fewer choices about what we get. It is a challenge to keep it coherent.

Her ability to continue structuring meaningful professional development is dependent on the discretion she is granted by her district and the state.

These findings from the case studies suggest that there is some progress being made to create content-specific professional development experiences rooted in the everyday work of teaching. We should stress, however, that most of these efforts are restricted to one subject area, or two in a few instances. They are also just beginning and in most districts have not reached scale. Expanding such efforts across grades and content areas to all teachers is still ahead of us—and success in doing so will require overcoming a set of barriers, which we turn to next.

Barriers to High-Quality Professional Development

Under ideal circumstances, all teachers would have access to content-rich learning experiences in the context of and relevant to their everyday work. Reaching this ideal is complicated for numerous reasons: the professional development domain is crowded with uncoordinated mandates and programs; an appropriate balance in terms of who controls choices about learning opportunities is difficult to achieve; teachers' work lives are not structured to support adult learning, especially in hard-to-staff schools; and the greater the intensity of support and the closer it is to teachers' daily work, the greater the need for accomplished teachers to assist others. Here we review these various barriers.

The Cacophony of Professional Development

The professional development system in California—for the most part—is not a system at all. Rather, it is a cacophony of opportunities and demands with multiple actors—teachers, principals, district administrators, state policy-makers—exerting control over who gets professional development and what it should look like. The state promotes and funds specific professional development initiatives. Districts and schools offer professional development based on their own improvement strategies. Private providers market a plethora of staff development services, many related to technology and curriculum matters. The universities play a role through extension courses, specializations and advanced degrees, and increasingly through professional development schools. The federal government also provides extensive support for professional development, much of which is targeted at specific disciplines or groups of teachers. Private foundations also play a role in promoting reform through professional development initiatives.

Just trying to list all the possible sources of professional development available to California teachers is a difficult task. Table 6-2 presents just some of the many professional development programs available through the state and federal governments. Various districts in the state also are beneficiaries of private support for a variety of initiatives that focus on professional development, such as the Bay Area School Reform Collaborative or the Los Angeles Annenberg Metropolitan Project.

Table 6-2

Selected State and Federal Professional Development Programs

Program	Beginning Date	Annual Funding	Focus
Selected State Programs			
Miller-Unruh	1966 EC*54101	$26.3 M	Reading specialists' salaries, some new teacher Professional Development (PD) in reading.
School Improvement Program	1966 EC52000	$406.1 M	PD related to school development plans.
Middle School Demonstration Programs	1969 EC58600-08	$5.7 M	Alignment with state standards.
California School Leadership Academy	1985 SB 813	$4.5 M	12 regional centers provide PD for administrators.
California Professional Development Consortia	1988 SB 1882	$4.1 M	11 regional consortia assist with PD to districts.
California Subject Matter Projects	1988 AB 1734	$35 M	Multiple subjects, 2- to 3-week summer sessions, school teams.
School Site Professional Development	1988 SB 1882	$16.4 M	High school PD.
California Technology Assistance Project	1996 AB 64	$12.4 M	Technology PD and other services via 11 regional centers.
Instructional Time and Staff Development Reform	1998 EC44579	$246.8 M	Reimburses districts for up to 3 days of PD.
Gifted and Talented Education	1999-2000 EC52200-12	$49.5 M	PD on gifted and talented education.
Governor's Performance Awards	1999 SB1X Ch 3	$157 M	Schoolwide award for exceeding API goal, may be used for PD.
Advancement Placement Challenge Grant Program	2000 SB 1689	$16.5 M	Increased access to AP courses, some PD.
California Professional Development Institutes	2000 AB 2881	$108 M	Beginning and underprepared teachers in reading, high school reading, math, ELL.
National Board for Professional Teaching Standards (NBPTS)	2000 SB 1666	$15 M	Incentives to earn NBPTS certification.
School Improvement/Student Achievement Block Grants	2000 AB 1667 Ch 71	$425 M	Grants to districts and schools for PD and other needs (facilities, technology, etc.).
High Priority Schools Grant Program for Low Performing Schools	2001 AB 961	$157 M	PD available for schools in first decile.
Immediate Intervention/ Underperforming Schools Program	2001 AB 961	$161 M	May support PD for schools that did not meet their API goals.
Intensive Professional Development in Reading and Mathematics	2001 AB 466	$335 M	All teachers in reading and math.
Selected Federal Programs			
ESEA Title I	2000	$1.12 B	Academic subjects, schoolwide plans.
ESEA Title II	2000 Eisenhower	$39 M	Math and science priority.
ESEA Title VI	2000 CSR	$158 M	Portion can be used for PD.
Federal Literacy Challenge	2000	$51.7 M	Staff training, hardware, software, and community links.
Reading Excellence Act	2000	$60 M	3-year grants in reading.

**EC indicates Education Code.*

These programs do support professional development, and thus are not detrimental in and of themselves, but they are not designed as a coherent system. The lack of coherence in the professional development system is the result of the fact that, at each

level of the system, programs are developed, decisions are made, resources are allocated—and yet there is no clear sense of the whole.

Control over Professional Development

Because so many players are involved in providing professional development statewide, issues of control become salient, in terms of planning and implementing professional development programs, and in terms of capacity to do so effectively.

The recent effort of the state to reach 70,000 teachers with high-quality professional development through the professional development institutes illustrates the complexities that arise around control and capacity. The University of California Office of the President (UCOP) was designated to administer the professional development institutes in an effort to ensure high-quality programs. However, the higher education infrastructure did not have the capacity to reach so many teachers, even though UCOP contracted with dozens of universities and colleges to provide the actual professional development. Further, the legislation required a quick program start-up, forcing decisions based on processing large numbers of teachers rather than on creating a viable strategy for professional development. In response to the capacity limitations, UCOP began to negotiate directly with a few large, urban school districts, which used PDI funds to support their local professional development programs. By the end of school year 2000-01, more than 60% of the teachers served through PDIs attended state-funded, district-planned, and district-administered programs, primarily in Los Angeles and San Diego.

For UCOP to reach large numbers of teachers required partnerships with districts, since the university system does not have the capacity to serve 70,000 teachers—at least not as those institutions are currently configured and within the time frame set by the legislation. However, creating partnerships means partially relinquishing control over how money is spent and the quality of the professional development provided with state funds. The problem with relinquishing control is that not all schools and districts have the capacity to plan and implement high-quality professional development.

Still, partnerships among the state, universities, county offices, districts, and schools may be one way to respond to the problems of control and capacity while ensuring that all professional development offerings are high in quality.

Teachers' Work, Workplaces, and Professional Development

On top of the chaotic system of professional development, teachers' work environments are not structured to support adult learning. How teachers are expected to work and the conditions in which they work severely limit opportunities to integrate their own learning into their daily work. In the typical school we visited, teachers remain in isolation for most the day behind closed doors with a set of students. When "planning" time is available, it is consumed by myriad minor crises or quick preparation for the next period. Within this context, teachers do not have the opportunity for ongoing adult-to-adult interaction focused on their practice. Professional development then is restricted to those structured opportunities outside of the school day or when release time is made available to attend a workshop. And although isolated workshops have the benefit of not impinging on a teacher's hectic schedule, they often are not the best delivery system for high-quality professional development.

Teachers' Professional Development in Hard-to-Staff Schools. Although all schools face difficulties integrating professional development into the everyday lives of teachers, hard-to-staff schools face even greater barriers. Workplace conditions in overcrowded, hard-to-staff schools undermine efforts to develop a professional culture of learning in these schools. In some schools we visited, all common space—where teachers might meet—was used for extra classrooms. These schools also suffer from a shortage of qualified substitutes, so that, even when funds are available, teachers cannot leave their classrooms to work with others.

In hard-to-staff schools, both new and veteran teachers suffer from a lack of coherent professional development. The new teachers—typically without preliminary credentials—struggle to balance the many demands on their time, including professional development. Most of these underprepared teachers find themselves taking courses in teacher preparation programs, receiving some kind of induction support (formal or informal), and being asked to participate in a variety of professional development activities. Typical of teacher comments is: "I haven't taken much besides the computer training classes. I have three college classes at night." As a principal explained, "Interns or teachers on emergency permits, they are very busy. … They do not have time for district-related PD. Their main priority is getting their credentials." In another district, an administrator described the incoherence experienced by underprepared teachers:

> We've got BTSA, we've got interns. People are getting killed with all of these programs. We're trying to figure out how to blend it all together so that BTSA, internships, and professional development send the same message to teachers—we need to figure out how all of that can have more coherence and put less multiple kinds of pressure on these individual teachers.

The time limitations facing underprepared teachers also can undermine schoolwide improvement efforts. One school, for example, has instituted weekly professional development as part of its improvement plan, developed under the state's Immediate Intervention/Underperforming Schools Program (II/USP). However, underprepared teachers cannot attend this professional development because their university courses conflict with the school's meeting schedule.

In these same schools, there often is a lack of systematic professional development geared specifically to veteran teachers' needs. As one district administrator said, "Because of the 25% or more turnover, you work continually with first-year teachers." Having concentrated numbers of pre-interns, interns, and teachers on emergency permits can overwhelm a district's or school's professional development initiatives, because the need to provide these teachers with help is so urgent. The result is that veteran teachers do not view much of the schoolwide professional development as relevant.

Veteran teachers in these schools reported feeling encouraged by principals and supported financially to pursue their own professional development through classes and workshops at local IHEs. However, like professional development for secondary school teachers, veteran teachers' participation in professional development depends on personal initiative. The resulting professional development thus varies from teacher to teacher. As one teacher described, "We have more freedom of choice, but many choose to do nothing."

In hard-to-staff schools with year-round schedules, the structural problems are worse. Year-round schedules reduce the possibility for schools to have the entire staff or grade level together for any kind of professional development activity. Students and teachers are subdivided into three or four tracks, with one track on vacation at any given time. One teacher described the convolutions needed to bring an entire staff together:

> If you want one day where all teachers meet together and you have three tracks, you have to combine a pupil-free day for one track, a minimum day for another track, and a buy-back day for the third track.

The multitrack organization of schools also confounds participation in the CPDIs and the CSMPs in places where programs are offered only in the summer and thus are available only to teachers working on traditional calendars. The professional development coordinator at a high school said:

> The professional development institutes are great if you are not year-round, because the sessions are in the summer…. The only teachers who are going to a state program from [this high school] are the foreign language teachers. Teachers do not want to be out of the classroom longer than a day at a time; it is murder when you come back.

We visited one CSMP that was planning more programs to coincide with different tracks. The problem, however, is that in some districts several different track schedules are operating simultaneously. Scheduling programs to meet all of the track requirements is nearly impossible.

The Capacity to Provide High-Quality Professional Development

As districts, with state support, seek to improve teachers' work lives and learning opportunities by providing support to teachers within their own schools—and as these efforts expand to reach most teachers—capacity problems arise. As BTSA, intern, and pre-intern programs expand, along with the increased reliance on coaches to provide professional development, the same limited pool of veteran teachers are being called on to assume many responsibilities.

In our statewide teacher survey, 40% of teachers with more than 1 year of experience undertook such responsibilities. The most prevalent responsibility was providing workshops and other training for teachers, assumed by 22% of teachers. Teachers also served as mentors for the various groups of underprepared and novice teachers: 14% of teachers served as a master or supervising teacher for preservice student teachers; 14% mentored interns, pre-interns, emergency-credentialed teachers, or new teachers not in BTSA; and 9% served as BTSA support providers or mentors. Teachers spent, on average, up to 14 hours per week on these activities, with supervising preservice student teachers taking the most time (see Table 6-3).

Table 6-3

Additional Professional Development Responsibilities Undertaken by Teachers

Activity	Percent of Teachers	Average Hours per Week per Participant
Providing workshops and other training for teachers in your school or district.	22%	3
Serving as a master or supervising teacher for preservice student teachers.	14%	14
Mentoring interns, pre-interns, emergency-credentialed teachers, or new teachers not in BTSA.	13%	4
Being a BTSA support provider/mentor.	9%	3

Source: SRI Survey of California Teachers (2001).
Note: See Appendix B for statistical information.

As teachers gain experience, they are more likely to take on additional professional development responsibilities. Needing the most professional development themselves, only a small fraction of teachers in their second year (6%) took on any additional responsibilities in 2000-01, and only one-quarter (25%) of teachers with 3 to 5 years experience held such responsibilities. The bulk of the responsibility for teacher development rests with teachers who have 6 or more years of experience. More than half (54%) of teachers with 6 to 10 years of experience, and nearly that percentage (46%) of teachers with more than 10 years experience, take on at least one additional professional development responsibility.[14]

The shortage of veteran teachers to take on these mentoring responsibilities is especially acute in schools with high percentages of emergency teachers. With a majority of faculty in their first few years of teaching, there are not enough coaches to fulfill all of the mentoring roles. As one district administrator said, "For us, money is not the issue, it's manpower. I don't have enough [experienced] people to cover the new people." Further, the lack of veteran teachers necessitates a weak implementation strategy. In one district, schools receive one coach for up to 70 teachers. Such a large coach-to-teacher ratio dilutes the intensity of this personalized model for professional development. Relying on coaches for all the various induction and professional development programs requires thousands of skilled coaches who are well versed not only in content and pedagogy, but in the pedagogy of coaching. Amassing enough qualified coaches strains districts that are heavily affected by teacher shortages.

Further, there is a wide variation in the quality of coaching. This inconsistency, in part, is due to the preparation individuals receive to be coaches. In one district, for example, coaches receive training one day each week on literacy content and pedagogy, and on how to best coach other teachers. In another district, however, the coaches themselves have never taught the curriculum about which they are providing assistance. These coaches have been described as being "just a page ahead of the teachers." Additionally, they receive no training on how to work with adults, and thus do not necessarily possess effective coaching skills. One coach in this district described feeling "rudderless."

Conclusion

The state has put a great deal of effort into improving California's teachers' learning opportunities. In the past 2 years in particular, initiatives have been put in place that are designed to reach all the state's teachers with high-quality professional development opportunities. The implementation of these policies is too recent to show any impact on our statewide survey of teachers. However, from our case studies, we have more recent examples of districts and schools, often in partnership with the state or with institutions of higher education, building content-rich and school-based professional development opportunities for teachers. Progress is most in evidence in coaching models for developing teachers' early literacy instructional strategies.

Expanding these promising practices across grade levels, content areas, and to all teachers will require a concerted effort at all levels of the system. If teachers are to have meaningful learning opportunities, these are more likely to come about as a result of the appropriate partnering of state agencies, the higher education community, districts, and schools. In the development of such partnerships, the state can play a leadership role and can provide some direct support—but it must also ensure that its mandates and regulations do not work against coherent efforts at the local level.

Special efforts also will have to be made to improve teacher working conditions. Teachers cannot be expected to learn if they are isolated from other adults and overwhelmed with other responsibilities throughout the day. Building effective learning opportunities into the school day will require more than structural and schedule changes. A long-term effort is needed to build a cadre of accomplished teachers with the skills and time to support other teachers.

The case of low-performing and hard-to-staff schools is especially problematic. Here the problems of multiple programs, poor working conditions, and low capacity in the veteran teaching staff relative to the schools' needs combine to work against reasonable learning opportunities for teachers. Clearly, these schools face tremendous challenges and are unlikely to improve without concerted efforts to offset the maldistribution of underprepared teachers in the state.

Endnotes

[1] See for example:

Darling-Hammond, L., & McLaughlin, M. W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan, 76*(8), 597-604.

Little, J. W. (1989). District policy choices and teachers' professional development opportunities. *Educational Evaluation and Policy Analysis, 11*(2), 165-179.

[2] See Shields, P. M., Esch, C. E., Humphrey, D. C., Young, V. M., Gaston, M., & Hunt, H. (1999). *The status of the teaching profession: Research findings and policy. A report to the Teaching and California's Future Task Force*. Santa Cruz, CA: The Center for the Future of Teaching and Learning.

[3] Bransford, J. D., Brown, A. L., & Cocking, R. R. (1999). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.

Corcoran, T. B. (1995). *Helping teachers teach well: Transforming professional development*. New Brunswick, NJ: Center for Policy Research in Education, Rutgers University.

Darling-Hammond, L., & McLaughlin, M. W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan, 76*(8), 597-604.

Little, J. W. (1993). Teachers' professional development in a climate of educational reform. *Educational Evaluation and Policy Analysis, 15*(2), 129-151.

Stein, M. K., Silver, E. A., & Smith, M. S. (1998). Mathematics reform and teacher development: A community of practice perspective. In J. G. Greeno & S. V. Goldman (Eds.), *Thinking practices in mathematics and science learning*. Mahway, NJ: Lawrence Erlbaum Associates.

[4] California Professional Development Reform Initiative. (1999, April). *Design for learning, California field guide for teachers' professional development—Draft.* Sacramento, CA: Author.

[5] UCOP. (2001). Personal communication.

[6] AB 1734. (1999-2000 session). Retrieved October 2000 from the World Wide Web: http://www.leginfo.ca.gov/pub/99-00/bill/asm/ab_1701-1750/ab_1734_bill_20000501_amended_asm.html

[7] ABX1 1, Assembly Bill, First Extraordinary Session (Chaptered 1999, April 6). Retrieved June 1999, from the California Legislative Counsel's Digest on the World Wide Web: http://www.leginfo.ca.gov/pub/99-00/bill/asm/ab_0001-0050/abx1_1_bill_19990406_chaptered.html

[8] The contribution of professional development was determined by the sum of teachers' responses on the following items of effectiveness: Participation in last year's professional development activities specifically deepened my grasp of the subject matter I teach; increased my knowledge beyond basic instructional and assessment techniques appropriate for the subject matter I teach; improved my skills to meet instructional needs of the student population at this school (e.g., English language learners or students from diverse cultural backgrounds); improved my classroom management, allowing me to try new instructional activities; increased my confidence and responsiveness in interactions with parents; improved my ability to consistently identify instructional goals appropriate to the subject matter I taught; increased my effectiveness at promoting student learning.

[9] The data for Figure 6-3 comes from the questionnaire item "To what extent do the following describe the professional development you participated in during the 1999-2000 school year?" There were four response choices including not at all, somewhat, moderately, and greatly.

[10] The following table presents the results of the analysis of the responses of teachers with at least 1 year of full-time teaching experience, by grade level. Teachers are reporting the extent to which their professional development focused on subject-matter content.

Grade level	Never/Seldom/Sometimes	Often/Very often	Row total
K-5	53%	47%	100%
6-8	54%	46%	100%
9-12	73%	27%	100%

Chi-sq: p=0.006, n=566

[11] The following table presents the results of the analysis of the responses of teachers with at least 1 year of full-time teaching experience who participated in the California Subject Matter Projects, by grade level.

Grade level	No participation	Participation	Row total
K-5	77%	23%	100%
6-8	82%	18%	100%
9-12	89%	11%	100%

Chi-sq: p=0.007, n=569

[12] The following table presents the results of the analysis of the responses of teachers with at least 1 year of full-time teaching experience, by grade level. Teachers are reporting the extent to which they work together to develop teaching materials or activities for particular classes.

Grade level	Never/Seldom/Sometimes	Often/Very often	Row total
K-5	58%	42%	100%
6-8	68%	32%	100%
9-12	71%	29%	100%

Chi-sq: p=0.009, n=560

[13] The following table presents the results of the analysis of the responses of teachers with at least 1 year of full-time teaching experience, by grade level. Teachers are reporting the extent to which participation in last year's professional development activities increased their effectiveness at promoting student learning.

Grade level	Not at all/A little/Adequately	A lot	Row total
K-5	72%	28%	100%
6-8	81%	19%	100%
9-12	83%	17%	100%

Chi-sq: p=0.033, n=561

[14] The following table presents the results of the analysis of the responses of teachers with at least 1 year of full-time teaching experience, by years of experience. Teachers were asked to respond to the following: Did you have any of the following responsibilities during this school year (2000-01)?

Years of experience	Did NOT have responsibility in the 2000-01 school year	Had at least one responsibility in the 2000-01 school year	Row total
2 or fewer	94%	6%	100%
3 to 5	75%	25%	100%
6 to 10	46%	54%	100%
More than 10	54%	46%	100%

Chi-sq: p=0.000, n=414

Part II. Policy Recommendations and Next Steps

In this second part of the report, we examine the support and learning opportunities provided to the state's teachers. As in other areas of teacher development, we document significant state investments in both induction and ongoing professional development. The Beginning Teacher Support and Assessment Program is the largest and most comprehensive state induction program in the nation. The professional development institutes, the Subject Matter Projects, and incentive grants to local districts are bolstering the state system of professional development.

There are many examples of intensive, school-based support for teachers to improve their practice, especially in the area of early literacy. Overall, however, teachers report that their learning experiences have only a moderate impact on their practice. Moreover, the focus on literacy—and, to some extent, mathematics—has restricted the range of professional development opportunities. In the hardest-to-staff and lowest-performing schools, workplace conditions and pressures on underprepared teachers to learn to teach and teach at the same time create an atmosphere not conducive to adult learning. Most importantly, the concentration of underprepared teachers in some districts and schools undermines induction and professional development support for all teachers.

Below, we summarize the Task Force's recommendations and next steps to meet two overarching goals of the *Teaching and California's Future* initiative:

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.

- Ensure that all schools are safe, clean, and orderly environments in which to learn and work by establishing a priority for, or set-aside of, funding to meet the backlog of facilities renovation, modernization, and construction needs in schools that experience the cumulative impact of:

  (1) Overcrowding and the attendant use of multitrack, year-round schedules

  (2) High percentages of socioeconomically disadvantaged students

  (3) High percentages of underprepared teachers

  (4) Older facilities in need of renovation or replacement.

All teachers will receive high-quality support for induction and the career-long professional development that will ensure that they stay current with advances in their field.

- Broaden the scope of professional development in low-performing, hard-to-staff schools to include the subject-matter areas required for high school graduation and entrance into college, including English language arts, mathematics, history/social science, science, foreign language, visual and performing arts, and physical education.

- Adopt budget language and/or administrative requirements designed to ensure that all professional development in low-performing, hard-to-staff schools, regardless of program or funding source, emphasizes teacher content knowledge and instructional skill. Specific factors include increasing teacher effectiveness in:

  (1) Promoting and guiding student learning to meet academic standards

  (2) Using knowledge of subject matter content

  (3) Knowledge of instructional practice beyond the basic techniques

  (4) Ability to identify and pursue appropriate instructional goals

  (5) Instructional skills necessary to meet individual student needs

  (6) Classroom management skills

  (7) Ability to communicate effectively with parents

- To ensure that professional development standards can be met, establish incentives, including compensation for pupil-free time for professional development, built into the annual schedule in selected low-performing, hard-to-staff schools. Additional compensated time should be allotted for site- and district-based professional development activities; support and mentoring of underprepared and novice teachers; leadership development for experienced, accomplished teachers; and completion of basic preparation by underprepared teachers. This time should be allotted without reducing any of the current instructional time provided to students.

- Authorize and encourage the coordination of all existing federal, state, and local professional development programs, pre-intern and intern programs, BTSA, and PAR in low-performing, hard-to-staff schools to achieve a coherent effort consistent with professional development standards. Establish a streamlined mechanism to waive existing program requirements that stand in the way of or complicate the achievement of this objective.

Appendix A. Data Collection Methods and Analyses

This appendix details the design and procedures for the major data collection methods and analyses. Specifically, we discuss the assumptions underlying the supply and demand projections; the sampling, administration, and analysis of the surveys; and case study data collection.

Projecting Supply and Demand

Using the best available historical data beginning with 1991-92, we projected the demand for the number of teachers needed and the number of credentialed teachers employed in the teaching workforce from 2001-02 through 2009-10. These projections incorporate the use of publicly available state-level data, as well as analyses conducted with specially requested data sets from state agencies, as we discuss below. In Chapter 2, we detailed the limitations of the current collected data to inform analyses of teacher supply and demand. Even using the best available data, we recognize that projection results vary widely, depending on key assumptions, and that these assumptions have inherent weaknesses resulting from limitations on the usability of the data for the purpose of projecting supply and demand. These assumptions and supporting analyses are described below.

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 for each year.
3. Calculate the difference between total demand and estimated number of credentialed teachers in the workforce.

The "gap" therefore is the difference between the total demand and the number of fully credentialed teachers available to meet this demand. Currently, individuals without full credentials fill this gap, including interns, pre-interns, and individuals on emergency permits and waivers.

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. These assumptions are detailed in Table A-1 below.

Table A-1

Demand Factors and Assumptions

Demand Factor	Assumptions
Projected student enrollment	Actual 2000-01 student enrollment (from CDE) plus annual growth rate of 1.1% in 2001-02, declining to -0.2% in 2009-10 (from Department of Finance Projections, 2000 Series).[1]
Pupil-to-teacher ratio	Actual 2000-01 statewide pupil-to-teacher ratio of 20.1, calculated by dividing CDE-reported total enrollment by CDE-reported total teachers for 2000-01. Pupil-to-teacher ratio held constant through 2009-10.[2]
Attrition rate	Estimated 4.2% of total teacher workforce annually, held constant through 2009-10. This is a 7-year average derived from cohort analysis of the Professional Assignment Information Form collected annually by CDE.[3] (See discussion of attrition rate below.)
Retirement rate	Estimated retirement rates using CalSTRS membership data from the CalSTRS fiscal 2001 annual report.[4] A retirement rate *index* 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 1.7%, derived from cohort analysis of the Professional Assignment Information Form collected annually by CDE.[5] (See discussion of historical retirement rate and retirement bulge below.)

Attrition Rate. The Professional Assignment Information Form (PAIF), an annual survey of all teachers employed in the state during the administration period, 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. Full-credential status means that the individual holds a preliminary or professional clear credential.[6] 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 constructed hypothetical cohorts using the database for 1990-91, 1992-93, and 1994-95 through 2000-01.[7] 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.[8] For each cohort, we calculated the difference between the numbers of teachers from one year to the next, from 1990-91 through 2000-01. Those reporting more than 50 years of experience were dropped from the analysis since they represented a very small number and data errors could not be ruled out. The difference for cohorts with fewer than 25 years of experience was assumed to be attrition from the profession.[9] (Those leaving after 25 years of experience or more were considered to have retired—see Retirement section below.)

The primary problem with this approach is that it poorly estimates attrition with a systematic bias to underestimate it. Specifically, teachers who step out of the profession for a limited time but reenter are included in the attrition numbers during

the year they leave. On their reentry into the profession, they are counted among those remaining in the profession for another cohort (assuming that they report the years of experience they had attained before stepping out). This calculation effectively 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 averaged across multiple cohorts, such differences may cancel out, this is not true of teachers from other states with more than 1 year of experience entering the California teaching force. Under this method, counting out-of-state teachers—averaging more than 3,200 annually from 1993-94 through 1999-2000—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, yielded a statewide estimate of attrition. Factoring in data on the number of out-of-state entrants from 1993-94 to 1999-2000, the estimate for attrition over those 7 years ranged from 2.8% to 6.8% and averaged 4.2% annually. We use the annual average to project attrition.[10]

Historical Retirement Rate. Using the same PAIF analysis as that for attrition, we assumed that changes in cohorts of 25 years experience or more represent retirement. From 1991-92 to 2000-01, the estimate for retirement ranged from 0.9% to 2.2% and averaged 1.7% annually.[11]

Retirement Rate. Rather than assuming a flat retirement rate, we factored a retirement bulge into the demand projections to account for the impending retirement of baby boomers. Using data from the CalSTRS fiscal year 2000 annual report,[12] the total number of active members was forecast by applying 10-year (1991-2000) 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 2000-01 to 2009-10 was projected by using actual age-based data. Members aged 51 to 60 in 2000 were assumed to retire at the CalSTRS members' average retirement rate of 60 from 2000-01 through 2009-10. 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 10-year (1991-2000) historical average CalSTRS members' retirement rate. The resulting index begins at 145 in 2001 and increases to 243 in 2009-10, peaking at 288 in 2007-08.[13]

Supply Calculations

The supply of credentialed teachers taking jobs in California includes veteran credentialed teachers deciding to continue teaching, newly credentialed teachers, reentrants, and out-of-state teachers. As we discuss in Chapter 3, "supply" refers to those who hold preliminary or professional clear credentials as specified by California's Commission on Teacher Credentialing (CTC) requirements *and* who are willing to take jobs for the salary, assignment, location, and working conditions offered. Our supply count does not include those who are teaching with emergency permits, waivers, pre-intern certificates, or internship credentials from CTC.

The larger supply *pool* of teachers qualified to teach but electing not to do so cannot be estimated with the data available.

Table A-2

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- and single-subject teaching credentials plus first-time special education and first-time and new-type education specialist credentials. (New-type includes those who previously held emergency permits.) Latest available data from CTC for 1999-2000. Projected annual change in new and first-time credentials recommended by private institutions based on 8-year (1992-93 to 1999-2000) average.[14]
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.[15] Seven-year (1993-94 to 1999-2000) average of the estimated number of reentrants as 1% of the workforce in the prior year, held constant from 2000-01 to 2009-10.
Out-of-state new hires	Seven-year (1993-94 to 1999-2000) average number of out-of-state new credentials of 3,216, held constant from 2000-01 to 2009-10 and subject to the assumed participation rates.

Participation Rate. By special request, 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 take full-time teaching jobs—contribution to CalSTRS was used as a proxy.

The data set is 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, the cohort was divided into four analytic categories based on whether the individual had previously held another full credential, emergency permit, intern credential, or no credential allowing him or her to be a teacher 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 just began teaching with those who received other credentials in past years and had likely 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, participation rates for the three most recent cohorts included in the analysis (1996-97 through 1998-99, post-CSR) were used 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, while another 2.2% took jobs during the second year and 0.5% in the third year or later. Of those who took jobs, 55% entered as substitutes and 45% entered in another capacity, though not necessarily a regular classroom teacher. Of those who began as substitutes, the vast majority (88%) changed status from substitutes to "non-substitutes" within 1 year. The participation rates were applied to those who did *not* begin as substitutes and the percentage of substitutes who converted to non-sub status within 1 year. The effective participation rates therefore are 81% within 1 year, 2.1% between 1 and 2 years, and 0.5% at 2 or more years after receiving the credential.

Reentrants. There is no direct measure of reentrants available, given the data currently collected in the state. To estimate this figure, we 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. The number of individuals new to teaching was taken from the CTC/CalSTRS analysis described under the participation rate analysis and 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 is assumed to be the number of reentrants. This number (1% of the workforce in the prior year) is held constant in the projections.

Calculating the Gap between Demand and Supply of Credentialed Teachers Taking Jobs

The supply of 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 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 credentialed teachers taking jobs represents the number of teaching positions unfilled by credentialed teachers. Underprepared teachers—interns, pre-interns, and those with emergency permits and waivers—would have to take those classrooms to maintain the current pupil-to-teacher ratio.

As we described above, the attrition rates are likely to be *under*stated, and the participation rates are likely to be *over*stated.

Statewide Surveys

Three statewide surveys were conducted: Survey of California Teachers, Survey of California Principals, and Survey of California District Hiring Administrators. The purpose of each survey was to capture respondents' perspectives on the teacher development system. Administered to a stratified random samples across the state, these surveys were designed to provide a representative portrait of respondents' views.

Survey of California Teachers

The Survey of California Teachers was designed to provide a representative portrait of teachers' views about the extent, nature, and effectiveness of their teacher preparation, induction, and other professional development experiences. A random sample of 1,000 full-time K-12 teachers in California were asked to report on a variety of topics, grouped into the following sections:

- Teaching assignment and preparation
- Job search and support for new teachers
- Workplace support and professional development
- Compensation
- Teacher background and student information.

Respondents were given specific instructions about the time period each question referred to, and certain questions were asked of only subgroups of teachers for whom they were appropriate. Table A-3 describes the type of respondent for each section and the time periods the questions inquired about.

The teacher survey instrument was modified from the 1999 Statewide Teacher Survey (see 1999 report for survey development process). Questions that did not provide useful information in the 1999 survey were improved, and some questions were changed to reflected changes in topic areas of interest to the study. The draft 2000-01 survey was piloted with five teachers to assess completion time and the comprehensibility of each survey item.

Sampling Procedures. An accurate and up-to-date list of all practicing teachers in California was not available to serve as a sampling frame. We therefore opted for a two-stage sampling approach—first selecting a stratified random sample of schools within California and then selecting teachers within those schools.

Stage 1: School Sample. The sampling frame for schools was developed by using the 1998-99 California Basic Educational Data System (CBEDS) database. Eligible schools were those identified in the CBEDS database as elementary, middle, junior, or high schools. Approximately 1,000 less-traditional schools were excluded, such as alternative high schools or community day schools, to allow for a more focused analysis of the experiences of teachers within the most typical school settings in the state. The 6,910 schools in our population were stratified along three dimensions: the percentage of faculty with less than a full credential (three ranges of less than full credentials), the size of their districts (three ranges of student enrollment), and grade levels served (elementary, middle, high). Junior high schools were placed in the middle school category. To provide a robust number of schools within each cell of this sampling frame, we selected a total of 120 schools for the survey. There were 40 schools in each of the three ranges for faculty with less than a full credential. Within each range of faculty with less than a full credential, about 60% of the schools were elementary schools, 20% were middle schools, and 20% were high schools.

Table A-3

Types of Respondents to the Survey of Teachers and Relevant Time Periods, by Survey Topic

Survey Topic	Type of Respondent	Time Period Referred to in Survey Item*
Teaching assignment	All	Current school year
Preparation	Teachers who completed their preparation less than 5 years ago as of November 2000	Period of preparation program
Job search	Teachers with fewer than 6 years of classroom teaching experience as of November 2000	Period of job search
Support for new teachers	Teachers with fewer than 6 years of classroom teaching experience as of November 2000	First 2 years of teaching
Workplace support	All	Current school year
Professional development	Teachers in at least their second year of teaching in 2000-01	1999-2000 school year†
Compensation	All	Current school year and 1999-2000 school year
Teacher background	All	Current school year

**The SRI Survey of California Teachers was administered from January 2001 through May 2001. Survey questionnaire administration is discussed later.*

†Only those teachers who had been formally assigned to provide guidance and assistance to new teachers answered questions about being a mentor for the time period during which they were formally assigned.

Stage 2: Teacher Sample. To build a sampling frame for teachers, we obtained teacher rosters for schools selected in Stage 1. Principals of the 120 selected schools were faxed a letter explaining the overall initiative, its sponsors, and the purpose of the survey. The letter requested a list of the school's full-time classroom teachers. Following the faxes, calls were made to all schools to obtain staff lists, and, when necessary, district permission was sought. When available, faculty rosters of sampled schools were also collected from the Internet. This process resulted in a sampling frame of teachers from 101 schools (84% of the original sample). Table A-4 shows the distribution of schools in the original sample (120 schools), the school-level response rate of these 120 schools by cell, and the corresponding number of schools from the statewide population that falls within each cell.

Table A-4

Distribution of School Sample, by Stratum

		Schools with less than or equal to 10% of faculty with less than a full credential			Schools with between 11% and less than or equal to 19% of faculty with less than a full credential			Schools with more than 20% of faculty with less than a full credential			**Row Total**
		District Size (Student enrollment)			**District Size** (Student enrollment)			**District Size** (Student enrollment)			
		<5,000	5,001-20,000	>20,000	<5,000	5,001-20,000	>20,000	<5,000	5,001-20,000	>20,000	
School Level											
Elementary											
	Schools sampled	7	9	7	3	8	11	3	7	15	70
	Response rate	57%	44%	100%	33%	50%	100%	100%	100%	93%	
	Schools in population	1,003	1,170	975	143	291	411	130	283	609	5,015
Middle											
	Schools sampled	3	3	3	2	2	4	2	2	4	25
	Response rate	100%	67%	100%	100%	100%	75%	100%	100%	75%	
	Schools in population	188	243	196	53	81	101	30	60	124	1,076
High											
	Schools sampled	2	3	3	2	4	4	2	2	3	25
	Response rate	100%	100%	100%	100%	75%	100%	100%	100%	100%	
	Schools in population	148	170	174	55	78	101	25	30	38	819
Column Total											
	Total school sample	12	15	13	7	14	19	7	11	22	120
	Statewide population of schools	1,339	1,583	1,345	251	450	613	185	373	771	6,910

After obtaining rosters of full-time teachers from the sampled schools, rosters were pooled in each cell (27 cells in total), and the sample for each cell was randomly selected from the total number of teachers in that cell by using a random number generator. Table A-5 shows the number of teachers sampled from each cell and the total number of teachers statewide that fall within that cell. The total number of teachers, 255,031, is the number of teachers working in 1998-99 in the population of 6,910 California schools eligible for study.

Table A-5

Distribution of Teacher Sample, by Stratum

		Schools with less than or equal to 10% of faculty with less than a full credential			Schools with between 11% and less than or equal to 19% of faculty with less than a full credential			Schools with more than 20% of faculty with less than a full credential			**Row Total**
		District Size (Student enrollment)			**District Size** (Student enrollment)			**District Size** (Student enrollment)			
		<5,000	5,001-20,000	>20,000	<5,000	5,001-20,000	>20,000	<5,000	5,001-20,000	>20,000	
School Level											
Elementary											
	Teachers sampled	50	84	66	36	95	61	12	38	158	600
	Teachers in population	19,904	33,594	26,440	3,939	10,288	6,501	2,872	9,160	38,389	15,1087
Middle											
	Teachers sampled	14	29	23	14	35	21	3	12	49	200
	Teachers in population	5,102	10,068	7,950	1,145	2,854	1,674	673	2,637	11,310	43,413
High											
	Teachers sampled	11	31	25	11	27	33	3	14	45	200
	Teachers in population	5,527	15,262	12,216	1,576	3,844	4,596	744	3,827	12,939	60,531
Column Total											
	Total teacher sample	75	144	114	61	157	115	18	64	252	1,000
	Statewide population of teachers	30,533	58,924	46,606	6,660	16,986	12,771	4,289	15,624	62,638	255,031

Survey Administration. The Survey of California Teachers questionnaire was administered by mail from January 2001 through May 2001.[1] In the first mailing, each teacher was sent a packet containing an explanatory letter signed by the Task Force cosponsors, a survey questionnaire, a postage-paid reply envelope, and $5 as a token of appreciation. To encourage teachers to respond promptly, teachers who returned their completed survey questionnaires were offered a chance to win one of 10 computers. Returned survey questionnaires were logged by unique identification numbers into a response-tracking system. Ten days after the initial mailing, a reminder postcard was sent to all nonrespondents. After another 2 weeks, a second survey questionnaire was sent to nonrespondents.

To maximize the response rate, a shortened version of the original survey questionnaire was sent to nonrespondents after the second mailing of the original survey. This shortened version included the most critical survey questionnaire items. Ten days after the mailing of the shortened survey questionnaire, a reminder postcard was sent to all nonrespondents. After another 2 weeks, a second shortened survey questionnaire was sent to nonrespondents.

Sixty-six percent of all teachers in the original sample responded by returning either the original or shortened version of the mail survey questionnaire. Many teachers who were sent survey questionnaires were eventually determined to have been ineligible for the study because they were no longer teaching, were not teaching at the sampled school, or were not teaching full-time. Of the eligible teachers, 69% responded to the survey questionnaire. Table A-6 shows the number of respondents and the effective response rate (the responses divided by the difference between the sample and the ineligibles) for each of the 27 cells of this sampling frame.

Data were entered into computer files for analysis. Spot checks for accuracy were made for data from the long survey questionnaire; data from the short survey questionnaire were entered twice and compared for accuracy. Data from the two versions of the questionnaire were merged into one computer file for analysis.

[1] Administration of the questionnaire was subcontracted out to a survey research firm.

Table A-6

Teacher Survey Response Rates, by Stratum

		Schools with less than or equal to 10% of faculty with less than a full credential			Schools with between 11% and less than or equal to 19% of faculty with less than a full credential			Schools with more than 20% of faculty with less than a full credential			**Row Total**
		District Size (Student enrollment)			**District Size** (Student enrollment)			**District Size** (Student enrollment)			
		<5,000	5,001-20,000	>20,000	<5,000	5,001-20,000	>20,000	<5,000	5,001-20,000	>20,000	
School Level											
Elementary											
	Respondents	27	64	41	25	61	42	6	22	108	396
	Effective response rate*	57%	78%	63%	71%	66%	71%	50%	58%	69%	65%
Middle											
	Respondents	12	18	16	12	26	15	1	5	34	139
	Effective response rate	86%	64%	70%	92%	79%	75%	50%	63%	74%	73%
High											
	Respondents	10	23	9	7	15	23	3	10	26	126
	Effective response rate	91%	82%	43%	64%	58%	72%	100%	71%	62%	71%
Column Total											
	Respondents	49	105	66	44	102	80	10	37	168	661
	Effective response rate	78%	75%	59%	76%	68%	73%	67%	64%	68%	69%

** Effective response rate is the responses divided by the difference between the sample and the ineligible.*

Survey Analysis. All survey analysis was conducted with the statistical software package SUDAAN, which is capable of analyzing data gathered in surveys that use complex sampling methods, as this study did. Each teacher in California did not have an equal chance of being selected for the survey because the study used a stratified sampling plan. For this reason, the respondents cannot be treated equally if the sample is to represent the population of California teachers. Instead, teachers' responses are adjusted to reflect their chance of participating in the study.[2] The following analyses were conducted:

- We examined the response distributions for each item and computed simple summary statistics.
- We examined the response distributions for subgroups of teachers defined by the key variables of interest shown in Table A-7.
- Chi-square tests were used to determine statistical differences in the distributions of subgroups on categorical variables.
- For analyses of continuous variables, F-tests were used to assess the mean differences among subgroups. These were followed by planned contrasts between subgroup pairs when there were three or more subgroups (e.g., percentage of faculty with less than a full credential).

Table A-7

Selected Key Independent Variables for Survey of Teachers

Independent Variable	Categories
Percentage of not fully credentialed teachers in respondent's school	≤10% not fully credentialed teachers ≥11% to ≤19% >20%
Grade span of respondent's school	Elementary Middle High
Years of experience	≤2 years ≥3 to ≤5 years ≥6 to ≤10 years >10 years

[2] For the sample to represent the target population of California teachers, each teacher's response was weighted by the inverse of the teacher's probability of being selected. In addition, we adjusted for possible effects of nonresponse bias, since the cells of the sample design had different response rates. Each teacher's responses also were weighted by the inverse of the response rate for the cell of the sample that the teacher represented. Thus, the final weight assigned to a teacher's response is the same for all teachers in a cell and is the product of two weights: the inverse of the probability of being selected into the sample and the inverse of the response rate for the cell.

Survey of California Principals

The Survey of California Principals was designed to provide a representative portrait of principals' views on recruiting teachers, teachers' career development, and teachers' opportunities for learning and professional growth. In this survey, a random sample of 1,000 K-12 principals were asked to report on a variety of topics, grouped into the following sections:

- Recruiting
- Teacher preparation
- Induction
- Professional development
- Workplace conditions and school background information.

Respondents were given specific instructions about the time period each question referred to, and certain questions were asked of only subgroups of principals for whom they were appropriate. Table A-8 describes the type of respondent for each section and the time periods the questions inquired about.

The survey questionnaire was a newly created instrument and was developed with input from the research community and from principals. The draft 2000-01 survey was piloted with two principals to assess completion time and the comprehensibility of each survey item.

Table A-8

Types of Respondents to the Survey of Principals and Relevant Time Periods, by Survey Topic

Survey Topic	Type of Respondent	Time Period Referred to in Survey Item*
Recruiting	All	Current school year and 1999-2000 school year
Preparation	Principals who hired newly credentialed teachers, interns, and/or emergency-permit teachers in the last 3 years	1998-99 school year through the 2000-01 school year
Induction	Principals whose teachers participate in induction programs	Current school year
Professional development	All	Current school year and summer of 2000
Workplace conditions and school background information	All	Current school year

* *The SRI Survey of California Principals questionnaire was administered from November 2000 through May 2001.*

Sampling Procedures. The sampling frame for principals was developed by using the 1998-99 CBEDS database. Eligible principals were chosen from the school sample that was developed for the Survey of California Teachers. The principals from the 6,910 schools in our population were stratified along three dimensions: the percentage of school faculty with less than a full credential (three ranges of less than full credentials), the size of their districts (three ranges of student enrollment), and grade levels served (elementary, middle/junior, high). We selected principals from a total of 1,001 schools for the survey.

Principal Sample. Principals were randomly sampled from the 27 cells of the three stratification variables. There were approximately 333 principals in each of the three ranges of school faculty with less than a full credential. Within each range of school faculty with less than a full credential, about 60% of the principals were elementary school principals, 20% were middle school principals, and 20% were high school principals. Table A-9 shows the number of principals sampled from each cell and the total number of principals statewide that fall within each cell. The total number of principals, 6,910, is the number of principals eligible for our study during the 1998-99 school year.

Table A-9

Distribution of Principal Sample, by Stratum

		Schools with less than or equal to 10% of faculty with less than a full credential			Schools with between 11% and less than or equal to 19% of faculty with less than a full credential			Schools with more than 20% of faculty with less than a full credential			**Row Total**
		District Size (Student enrollment)			**District Size** (Student enrollment)			**District Size** (Student enrollment)			
		<5,000	5,001-20,000	>20,000	<5,000	5,001-20,000	>20,000	<5,000	5,001-19,999	>20,000	
School Level											
Elementary											
	Principals sampled	64	74	62	34	69	97	25	55	119	599
	Principals in population	1,003	1,170	975	143	291	411	130	283	609	5,015
Middle											
	Principals sampled	20	26	21	15	23	29	9	19	39	201
	Principals in population	188	243	196	53	81	101	30	60	124	1,076
High											
	Principals sampled	20	23	24	16	22	29	18	22	27	201
	Principals in population	148	170	174	55	78	101	25	30	38	819
Column Total											
	Total principal sample	104	123	107	64	114	155	53	96	185	1,001
	Statewide population of principals	1,339	1,583	1,345	251	450	613	185	373	771	6,910

Survey Administration. The Survey of California Principals questionnaire was administered by mail from November 2000 through May 2001.[3] In the first mailing, each principal was sent a packet containing an explanatory letter signed by the Task Force cosponsors, a survey questionnaire, and a postage-paid reply envelope. Returned survey questionnaires were logged by unique identification numbers into a response-tracking system. Ten days after the initial mailing, a reminder postcard was sent to all nonrespondents. After another 2 weeks, a second survey questionnaire was sent to nonrespondents.

To maximize the response rate, a telephone questionnaire of nonrespondents was conducted for approximately 5 weeks during May and June 2001. Principals were telephoned repeatedly during this 5-week period until they granted a phone interview, refused to participate, or were determined to be ineligible. Not all survey nonrespondents were reached by phone by the end of the 5-week period. Telephone interviewers were directed to make a particular effort to raise response rates in cells that had few respondents. The phone questionnaire was a shortened version of the original mail questionnaire and included the most critical items on teacher recruitment, preparation, and career development.

Forty-seven percent of all principals in the original sample responded by returning the original survey questionnaire or participating in the telephone questionnaire. Many principals who were sent survey questionnaires were eventually determined to have been ineligible for the study because they had not completed at least 1 year in their roles as principals at the sampled schools. Of the eligible principals, 55% responded to the questionnaire (Table A-10).

Data were entered into computer files for analysis. Spot checks for accuracy were made for data from the long survey questionnaire; data from the short survey questionnaire were entered twice and compared for accuracy. Data files from the two versions of the questionnaire were merged into one computer file for analysis.

[3]Administration of the questionnaire was subcontracted out to a survey research firm.

Table A-10

Principal Survey Response Rates, by Stratum

		Schools with less than or equal to 10% of faculty with less than a full credential			Schools with between 11% and less than or equal to 19% of faculty with less than a full credential			Schools with more than 20% of faculty with less than a full credential			**Row Total**
		District Size (Student enrollment)			**District Size** (Student enrollment)			**District Size** (Student enrollment)			
		<5,000	5,001-20,000	>20,000	<5,000	5,001-20,000	>20,000	<5,000	5,001-20,000	>20,000	
School Level											
Elementary											
	Respondents	31	41	26	23	37	42	12	28	40	280
	Effective response rate*	58%	65%	48%	82%	65%	48%	52%	57%	48%	58%
Middle											
	Respondents	0	13	20	9	15	17	3	8	15	100
	Effective response rate	0%	59%	95%	69%	83%	61%	43%	53%	48%	57%
High											
	Respondents	9	13	11	7	8	11	8	10	10	87
	Effective response rate	64%	68%	52%	58%	47%	44%	50%	56%	43%	54%
Column Total											
	Respondents	40	67	57	39	60	70	23	46	65	467
	Effective response rate	41%	64%	65%	70%	65%	51%	41%	48%	46%	55%

** Effective response rate is the responses divided by the difference between the sample and the ineligibles.*

Survey Analysis. All survey analysis was conducted with the statistical software package SUDAAN, so that principals' responses could be weighted appropriately in the analysis.[4] The following analyses were conducted:

- We examined the response distributions for each item and computed simple summary statistics.
- We examined the response distributions for subgroups of principals defined the by key variables of interest shown in Table A-11.
- Chi-square tests were used to determine statistical differences in the distributions of subgroups on categorical variables.
- For analyses of continuous variables, F-tests were used to assess the mean differences among subgroups. These were followed by planned contrasts between subgroup pairs when there were three or more subgroups (e.g., percentage of faculty with less than a full credential).

Table A-11

Selected Key Independent Variables for Survey of Principals

Independent Variable	Categories
Percentage of not fully credentialed teachers in respondent's school	≤10% not fully credentialed teachers ≥11% to ≤19% >20%
Grade span of respondent's school	Elementary Middle High
Teacher preparation program type	Traditional program Intern program

[4] For the sample to represent the target population of California principals, each principal's response was weighted by the inverse of the principal's probability of being selected. In addition, we adjusted for possible effects of nonresponse bias, since the cells of the sample design had different response rates. Each principal's responses also were weighted by the inverse of the response rate for the cell of the sample that the principal represented. Thus, the final weight assigned to a principal's response is the same for all principals in a cell and is the product of two weights: the inverse of the probability of being selected into the sample and the inverse of the response rate for the cell.

Survey of California District Hiring Administrators

The Survey of California District Hiring Administrators was designed to provide a representative portrait of district hiring administrators' views on teacher preparation and district recruiting and hiring practices. In this survey, a random sample of 300 K-12 school district hiring administrators were asked to report on a variety of topics, grouped into the following sections:

- Background information
- Recruiting and hiring
- Preparation of teacher candidates
- Hiring teachers on emergency permits.

Respondents were given specific instructions about the time period each question referred to, and certain questions were asked of only subgroups for whom the questions were appropriate. Table A-12 describes the type of respondent for each section and the time periods the questions inquired about.

The survey questionnaire was developed with input from the research community and from a district hiring administrator. The draft 2000-01 survey questionnaire was piloted with one district hiring administrator to assess completion time and the comprehensibility of each survey item.

Table A-12

Types of Respondents to the Survey of District Hiring Administrators and Relevant Time Periods, by Survey Topic

Survey Topic	Type of Respondent	Time Period Referred to in Survey Item*
Background information	All	Current school year
Recruiting and hiring	All	Current school year
Preparation of teacher candidates	Districts that had hired newly fully credentialed teachers in the past 3 years	1998-99 school year through the current school year
Hiring teachers on emergency permits	1. Districts that had hired emergency-permit teachers in the past 3 years 2. Districts that have pre-intern programs	1. 1998-99 school year through the current school year 2. Current school year

**The SRI Survey of California District Hiring Administrators was administered from December 2000 through January 2001.*

Sampling Procedures. The sampling frame for the district survey was developed by using the 1998-99 CBEDS database. Ineligible districts were those identified in the CBEDS database as districts that provide only specialized instruction, such as county offices of education that provide only special education instruction, or the California Youth Authority, which provides instruction only to students in detention centers. Approximately 30 district were excluded to allow for a more focused analysis of the experiences of districts within the most typical settings in the state. The 1,010 districts in our population were stratified along two dimensions: the percentage of teachers in a district with less than a full credential (three ranges of less than full credentials) and size of the district (three ranges of student enrollment). A total of 306 districts were selected for the survey.

District Sample. Districts were randomly sampled from the nine cells of the two stratification variables. The districts were distributed about evenly among the three ranges for faculty with less than a full credential. Within each range of district size, approximately 60% of the districts were small districts (fewer than 5,000 students), 20% of the schools were medium-sized districts (5,001 to 20,000 students), and 20% of the schools were large districts (more than 20,000 students). Table A-13 shows the number of districts sampled from each cell and the total number of districts statewide that fall within that cell. The total number of districts, 1,010, is the number of California districts that were eligible for study during the 1998-99 school year.

Table A-13

Distribution of District Sample, by Stratum

		District Size (Student enrollment)			Row Total
		<5,000	5,001-20,000	>20,000	
Percentage of school faculty with less than a full credential					
≤10%					
	Districts sampled	63	22	21	106
	Districts in population	542	135	28	705
≥11 to ≤19%					
	Districts sampled	61	26	15	102
	Districts in population	109	54	15	178
≥20%					
	Districts sampled	61	24	13	98
	Districts in population	86	26	15	127
Column Total					
	Total district sample	185	72	49	306
	Statewide population of districts	737	215	58	1,010

Survey Administration. The Survey of California District Hiring Administrators questionnaire was administered by telephone from December 2000 through February 2001.[5] Interviewers called districts to identify the appropriate person to interview and establish interview times. An introductory letter was faxed to appropriate district personnel once they had been identified. Completed telephone questionnaires were logged by unique identification numbers into a response-tracking system. Seventy-six percent of all districts in the original sample completed a telephone questionnaire (Table A-14). Data were entered into computer files for analysis and were spot-checked for accuracy.

[5] A telephone survey research firm was contracted to conduct the telephone questionnaires and input the responses.

Table A-14

District Survey Response Rates, by Stratum

		District Size (Student enrollment)			Row Total
Percentage of district faculty with less than a full credential					
≤10%		<5,000	5,001-20,000	>20,000	
	Respondents	54	14	13	81
	Response rate	86%	64%	62%	71%
≥11 to ≤19%					
	Respondents	45	19	10	74
	Response rate	74%	73%	67%	71%
≥20%					
	Respondents	50	19	11	80
	Response rate	82%	79%	85%	82%
Column Total					
	Respondents	149	52	34	235
	Response rate	81%	72%	71%	77%

Survey Analysis. All survey analysis was conducted with the statistical software package SUDAAN.[6] The following analyses were conducted:

- We examined the response distributions for each item and computed simple summary statistics.
- We examined the response distributions for subgroups of district hiring administrators defined by the key variables of interest shown in Table A-15.
- Chi-square tests were used to determine statistical differences in the distributions of subgroups on categorical variables.
- For analyses of continuous variables, F-tests were used to assess the mean differences among subgroups. These were followed by planned contrasts between subgroup pairs when there were three or more subgroups (e.g., percentage of faculty with less than a full credential).

Table A-15

Selected Key Independent Variables for Survey of District Hiring Administrators

Independent Variable	Categories
Percentage of not fully credentialed teachers in respondent's district	≤10% not fully credentialed teachers ≥11 to ≤19% ≥20%
District size	Fewer than 5,000 students enrolled 5,001 to ≤20,000 >20,000

[6] For the sample to represent the target population of California district hiring administrators, each district administrator's response was weighted by the inverse of the administrator's probability of being selected. In addition, we adjusted for possible effects of nonresponse bias, since the cells of the sample design had different response rates. Each district administrator's responses also were weighted by the inverse of the response rate for the cell of the sample that the district administrator represented. Thus, the final weight assigned to a district administrator's response is the same for all district administrators in a cell and is the product of two weights: the inverse of the probability of being selected into the sample and the inverse of the response rate for the cell.

Case Studies of Local Teacher Development Systems

To complement the statewide data gathered through both *The Status of the Teaching Profession 2000: An Update to the Teaching and California's Future Task Force* (2000) and the three statewide surveys, we conducted in-depth case studies of eight local systems of teacher development. These case studies examined the relationships among the organizations that are involved with the teacher development system, as well as the perspectives of those working within this system.

Sample of Local Systems

Similar to the case studies conducted for the 1999 report, each case was selected to capture a local system of teacher development. The local system of teacher development includes the organizations and programs that serve all those participating in the teacher workforce, as well as those who have yet to enter the workforce but who are preparing to become teachers. We conceptualized each local system by first considering the norms, policies, and practices that influence the decisions and define the learning opportunities of individual teachers who are or will be participating in the workforce. We then considered the resources, policies, and practices of the school and district context and the ways in which these influence what occurs in schools. The district context influences what occurs at the schools, and the resources provided by the state and federal governments influence what occurs at the district and the schools.

To select the eight local systems of teacher development for the case studies, school districts or, in two cases, areas served by more than one district were identified first and were selected to reflect a range of urbanicity: urban, suburban, and rural districts/areas. Within each urbanicity category, districts/areas were selected to provide a range of the percentage of not fully credentialed teachers and to represent the "many Californias," defined primarily by geography. Districts/areas were selected on the basis of nominations from the field and background screening by telephone. Once the districts/areas were selected, local institutions of higher education (IHEs) that serve them were selected: 10 urban IHEs, 5 suburban IHEs, and 2 rural IHEs. Table A-16 lists the districts/areas and their respective IHEs that make up the eight local systems of teacher development.

Table A-16

Case Study Districts/Areas and IHEs

Urbanicity	District/Area	Institution of Higher Education
Urban	Los Angeles	CSU Los Angeles CSU Dominguez Hills CSU Northridge UCLA Center X
	Long Beach	CSU Fullerton CSU Long Beach
	Oakland	CSU Hayward
	San Diego	San Diego State National University CSU San Marcos
Suburban	San Mateo (2 districts)	San Francisco State
	Clovis	CSU Fresno Fresno Pacific University
Rural	Coachella	CSU San Bernardino
	Susanville (3 districts)	Chico State

At the request of the CSU Office of the Chancellor, four additional California State University campuses were included in this study but were not connected to any of the districts/areas in the sample. These campuses—Sacramento State, Cal Poly San Luis Obispo, San Jose State, and CSU Bakersfield— were added to enrich our understanding of the California State University system of teacher preparation.

School and Teacher Samples

For 4 of the 8 districts/areas, we selected two elementary, one middle, and one high school. In another two districts/areas, we selected one elementary, one middle, and one high school; in another district/area we selected two elementary schools and one middle school; and in the last district/area we selected two K-8 schools and one high school. We chose schools that reflected the student demographics of the district overall and whose standardized test scores typified the districts' schools. Typically, schools were within a single district and the same feeder pattern. However, two of the eight district/areas, San Mateo and Susanville, included more than one district because the elementary and high school districts were not unified, as was the case in San Mateo, or the districts had only one school, as was the case in Susanville.

The number of teachers selected at each school ranged from 4 to 22, depending on the size of the school; however, at a minimum we interviewed 2 "experienced" teachers (more than 5 years of teaching experience) and two "new" teachers (5 years or less of teaching experience). Where possible, we interviewed teachers from both primary and upper grades at the elementary level and teachers in the core subject areas of English, social science, math, and science at the middle school and high school levels. Within this mix of teachers, we also included BTSA support providers, BTSA participants, coaches, mentor teachers, newly credentialed teachers, university and district interns, emergency permit teachers, and pre-interns.

This strategy provided a sample size of 26 schools and 209 teachers (not including full-time coaches/support providers), as shown in Table A-17.

Table A-17

Case Study Sample

Level	Schools	Teachers
Elementary (including K-8)	13	98
Middle	6	45
High	7	66
Total	26	209

University Faculty and Administrators

Site visits to 19 university campuses included 16 California State University campuses, 1 University of California campus, and 2 independent university campuses. At each campus, faculty and administrators involved in teacher preparation, as well as campus leadership, were interviewed. The number of university faculty and administrators selected ranged from 4 to 19. Where possible, we selected teacher preparation faculty, school or department of education administrators and deans, deans of other colleges or departments, university presidents or provosts, and students enrolled in teacher preparation programs. This strategy provided a sample of 241 teacher preparation faculty and administrators and 81 students.

Site Visits

Site visits to the eight systems were conducted during the 2000-01 school year, and ranged from 5 to 12 person-days on-site in teams of two to four researchers, depending on the complexity of the local system. In each system, we conducted in-depth interviews of teachers, school administrators, district-level personnel, and university faculty and administrators. Table A-18 lists the types of interviewees. We also conducted focus groups with individuals enrolled in teacher preparation programs. Interviews and focus groups with newer teachers emphasized teachers' preparation, recruitment and job search, induction experiences, and workplace conditions. Interviews and focus groups with more experienced teachers focused on preparedness of new teachers, induction support for new teachers, professional development

opportunities, and workplace conditions. Interviews and focus groups were semistructured, framed by interview topic guides that were flexible enough to capture the respondents' unique stories but that had sufficient prompts to provide an acceptable level of data uniformity to permit cross-case comparisons.

Table A-18

Case Study Interviewees

Level	Types of Interviewees
School	• Teachers • Principals • Specialists with teacher support roles (e.g., coaches, support providers, reading specialists)
District	• Superintendent • Curriculum specialists, staff developers, professional development coordinators, BTSA coordinator • Recruiting and hiring managers • District intern program administrators
University	• Administrators • Faculty • Teacher education students

Case Study Analysis

Detailed case study debriefing forms guided the preparation of internal case study reports. Each site visiting team was responsible for analyzing the data collected for its own site and synthesizing the data in the case study reports. One analytic meeting with all site visitors was held to discuss findings within and across cases, and to develop cross-site themes for each major category of teacher development (supply and demand, recruitment, preparation, etc.). Several meetings with smaller groups of site visitors were held to continue to develop the cross-site themes that were identified in the analytic meeting of all site visitors. We analyzed case study data according to various strata by which we sampled (e.g., percentage of faculty with less than full credentials and urbanicity), as well as other variables that emerged as salient, such as school level.

Integrated Analysis. Results of the teacher, principal, and district hiring administrator survey data analyses were compared with themes emerging from case study data. The case study data provided examples to illustrate patterns found in the survey data. Disconfirming survey and case study data were examined to identify possible reasons for the discrepancy.

Endnotes

[1] California Department of Education (CDE), Educational Demographics Unit. (2001). *Statewide enrollment in California public schools by ethnic designation, 2000-01.* Retrieved July 2001 from the World Wide Web: http://data1.cde.ca.gov/dataquest.

California State Department of Finance. (2000). *California K-12 public enrollment projections by ethnicity, 2000 series.* Retrieved July 2001 from the World Wide Web: http://www.dof.ca.gov/html/demograp/k12ethtb.htm.

Note: Because CDE includes students under the California Youth Authority, whereas DOF does not, the *rate* of growth used in the DOF projections from 2001-02 through 2009-10 is applied to the student enrollment CDE reported in 2000-01.

[2] California Department of Education (CDE), Educational Demographics Unit. (2001). *Statewide enrollment in California public schools by ethnic designation, 2000-01.* Retrieved July 2001 from the World Wide Web: http://data1.cde.ca.gov/dataquest.

CDE, Educational Demographics Unit. (2001). *Number of teachers in California public schools by ethnic designation and gender, 2000-01.* Retrieved July 2001 from the World Wide Web: http://data1.cde.ca.gov/dataquest.

[3] *California* Department of Education (CDE). *Professional Assignment Information Form* for years 1991-92, 1993-94, 1995-96, 1996-97, 1997-98, 1998-99, 1999-2000, 2000-01. PAIF data were not collected in 1991-92 and 1993-94. Years 1996-97 through 2000-01 were retrieved from the World Wide Web http://www.cde.ca.gov/demographics/files/paif.htm. Data files and file structures for all other years were specially requested from CDE Educational Demographics Unit.

[4] California State *Teachers'* Retirement System (CalSTRS). (2001, January 1). "Population information for fiscal year 1999-2000 (As of June 30, 2000)," *California State Teachers' Retirement System and related issues*. Sacramento, CA: Author.

[5] Ibid.

[6] CDE. (2001). *Professional Assignment Information Form. File structure.* Retrieved May 2001 from the World Wide Web: http://www.cde.ca.gov/demographics/files/paif.htm

[7] CDE reported that PAIF data are not available for 1991-92 and 1993-94.

[8] 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 dropped from the cohort. Thus, the size of the cohort was reduced by the number of individuals changing districts, as well as those leaving the profession. In other words, Fetler overstated attrition by capturing both attrition from the district and attrition from the profession.

Fetler, M. (1997, January). Where have all the teachers gone? *Education policy analysis archives,* 5(2).

[9] The number of teachers with more than 1 year of experience consistently decreases from year to year.

[10] In Shields et al. (1999), we used the attrition and retirement rates reported in Fetler (1997). Our analyses of attrition and retirement are therefore different from those used previously because of updated data, in addition to a slightly different method, as detailed in the text.

Fetler, M. (1997, January). Where have all the teachers gone? *Education policy analysis archives,* 5(2).

Shields, P., Esch, C., Humphrey, C., Young, V., Gaston, M., & Hunt, H. (1999). *The Status of the Teaching Profession: Research Findings and Policy Recommendations. A Report to the Teaching and California's Future Task Force.* Santa Cruz, CA: The Center of the Future of Teaching and Learning.

[11] Retirement data are available for more years than attrition data are because the attrition estimates also incorporate data on out-of-state credentials, which we have for fewer years.

[12] CalSTRS. (2001, January 1). "Population informationfor fiscal year 1999-2000 (As of June 30, 2000)," *California State Teachers' Retirement System and related issues*. Sacramento, CA: Author.

[13] These index figures differ from those estimated in Shields et al. (1999) because data were updated for the latest 2 years.

[14] California Commission on Teacher Credentialing (CTC). (1998). *Numbers of multiple and single subject teaching credentials issued by the Commission upon the recommendation of California institutions of higher education with Commission-approved programs*. Sacramento, CA: Author.

CTC. (1999). *Report on the number of individuals receiving California certification.* Sacramento, CA: Author.

CTC. (2000). *Credentials granted during the fiscal year 1998-99*. Sacramento, CA: Author.

CTC. (2001). Personal communication.

Note: Data for years 1991-92 to 1996-97 are from CTC (1998); data for 1997-98 are from CTC (1999); data for 1998-99 are from CTC (2000); data for 1999-2000 are from CTC (2001). Annual totals include first-time and new-type, multiple- and single-subject credentials. Totals include internship, preliminary, and professional clear credentials. Total for 1998-99 is a workload number, indicating the number of credentials processed by CTC. CTC estimates that workload numbers are within 1% to 5% of the total number actually issued. These data do not include district interns.

[15] Number of new hires includes all recipients of first-time/new-type preliminary credentials, intern credentials, and emergency permits who took jobs, as indicated by contribution to CalSTRS.

Appendix B. Statistical Information for Graphs and Tables in Chapters 3-6

This appendix provides statistical information for graphs and tables that present survey data throughout this report. Please note that percentages are based on weighted data.

Chapter 3 – Teacher Preparation

Figure 3-5

Reasons for Teaching While Learning to Teach

The following table presents the responses of teachers who completed their teacher preparation programs or who had completed some coursework toward their preliminary credentials less than 5 years ago.

How important was each of the following in your decision to teach before or while attending a preservice preparation program?	Percent reporting "Very important" in making the decision to teach before preparation	Standard error	n
I didn't want to give up income while attending a preparation program.	59%	4.01	147
I couldn't afford the tuition and expenses for a full-time preparation program.	47%	4.22	144
I have taught in some capacity before and felt prepared.	33%	4.56	147
I intended on being prepared first, but a teaching opportunity came up.	28%	3.47	147
I wanted to make sure that I wanted a career in teaching before committing to a preparation program.	27%	3.82	152
I thought that preparation was basically a formality and that it wouldn't matter to my work whether I completed it before taking a teaching job.	17%	3.01	144

Figure 3-7

Teacher Report of Program Responsiveness

The following table presents the responses of teachers who completed their teacher preparation programs less than 5 years ago, or who were completing, or intended to complete, the requirements for a preliminary credential.

Teacher preparation program responsiveness	Percent reporting "Agree"	Standard error for "Agree"	Percent reporting "Strongly agree"	Standard error for "Strongly agree"	n
Courses were available and I was able to enroll in them when I was ready to take them.	41% (68)	4.78	40% (72)	4.07	171
My transcript was reviewed by program administrators in a timely manner to determine subject-matter competency.	55% (81)	4.84	22% (38)	3.42	154
From the beginning of the program, I clearly understood what I needed to do to demonstrate subject-matter competency.	49% (83)	5.10	26% (47)	4.43	171
The courses built on substantive knowledge gained in previous courses, and I was able to take the courses in a logical sequence.	54% (94)	4.28	11% (20)	3.16	172

Note: Numbers of respondents are in parentheses.

Figure 3-8

Percentage of Teachers Reporting Daily Feedback during Student Teaching

The following table presents the results of the analysis of the responses of traditionally and nontraditionally prepared teachers related to the extent to which they agreed with "During my student-teaching period, I worked in the classroom, receiving daily feedback from the supervising teacher."

Preparation route of teacher	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Row total
Traditional	1%	12%	4%	35%	48%	100%
Nontraditional	13%	29%	15%	28%	15%	100%

Chi sq: p=0.000, n=130

Figure 3-9

District Officials' Reports on Preparedness of Recently-hired Teachers

The following table presents the responses of district hiring administrators who reported that teacher candidates, hired in the past 3 years from the university that is their main supplier of candidates, were "Adequately prepared" or "Well prepared."

How well prepared, along the following dimensions, were candidates hired in the last 3 years?	Percent reporting "Adequately prepared"	Standard error for "Adequately prepared"	Percent reporting "Well prepared"	Standard error for "Well prepared"	n
Had good grasp of the subject matter they were credentialed to teach.	46% (76)	4.61	47% (90)	4.59	182
Had knowledge of basic instructional techniques appropriate for the subject matter they were credentialed to teach.	43% (82)	4.48	44% (80)	4.56	183

Note: Numbers of respondents are in parentheses.

Figure 3-10

Principals' Responses on Teacher Preparation

The following table presents the responses of principals who reported that teacher candidates hired in the past 3 years were "Adequately prepared" or "Well prepared."

How well prepared, along the following dimensions, were candidates hired in the last 3 years?	Percent reporting "adequately prepared"	Standard error for "adequately prepared"	Percent reporting "well prepared"	Standard error for "well prepared"	n
In the subject matter they are credentialed to teach.	37% (139)	2.99	54% (198)	3.10	367
In knowledge and use of the basic instructional and assessment techniques appropriate for the subject matter they are credentialed to teach.	44% (142)	3.29	40% (119)	3.26	310
In basic skills to meet instructional needs of the student population at this school (e.g., English language learners or students from diverse cultural backgrounds).	45% (171)	3.10	36% (133)	2.98	368
To organize and manage their classrooms well.	40% (165)	2.92	38% (127)	3.05	369
To be confident, responsive, and supportive in interactions with parents.	45% (143)	3.30	36% (107)	3.25	308
To work collaboratively with other teachers.	34% (109)	3.13	56% (169)	3.31	307
To identify instructional goals appropriate to the subject matter they are credentialed to teach	50% (152)	3.32	34% (112)	3.13	310
To promote student learning effectively	42% (166)	2.98	41% (147)	3.04	369

Note: Numbers of respondents are in parentheses.

Figure 3-11

Teacher Reports of the Effectiveness of their Preparation

The following table presents the responses of teachers who completed their teacher preparation programs less than 5 years ago, or who were completing, or intended to complete, the requirements for a preliminary credential.

We are interested in whether you think your preparation program was/is effective, given what you know about being a teacher. *My teacher preparation program…*	Percent reporting "Adequately"	Standard error for "Adequately"	Percent reporting "A lot"	Standard error for "A lot"	n
Reinforced my knowledge of the subject matter I am credentialed to teach.	43% (80)	3.02	21% (45)	2.74	199
Gave me knowledge of and practice in basic instructional and assessment techniques appropriate for the subject matter I am credentialed to teach.	43% (76)	4.38	31% (51)	3.81	171
Gave me basic skills to meet instructional needs of the student population at this school (e.g., English language learners or students from diverse cultural backgrounds).	43% (87)	3.92	29% (54)	2.86	200
Helped me organize and manage a classroom well.	36% (66)	3.11	29% (61)	3.19	201
Prepared me to be confident, responsive, and supportive in interactions with parents.	36% (60)	3.01	17% (31)	3.36	170
Prepared me to work collaboratively with other teachers.	40% (68)	4.01	33% (55)	3.69	172
Taught me to identify instructional goals appropriate to the subject matter I am credentialed to teach.	44% (80)	4.42	27% (48)	4.18	172
Helped me be effective at promoting student learning.	45% (90)	3.94	35% (71)	4.16	200

Note: Numbers of respondents are in parentheses.

Figure 3-12

Principals' Perceptions of Preparedness of New Hires: Interns vs. Fully Credentialed Candidates

The following table presents the results of the analysis of the responses of principals who indicated that their new teacher hires were "Well prepared."

How well prepared, along the following dimensions, were *candidates hired in the last 3 years*?	Proportion of principals rating their fully credentialed new hires as "Well prepared"	Proportion of principals rating their intern new hires as "Well prepared"	z-score	n
New hires are well prepared in the subject matter they are credentialed to teach.	0.56	0.37	4.31	233
New hires were well prepared in the knowledge and use of the basic instructional and assessment techniques appropriate for the subject matter they are credentialed to teach.	0.38	0.27	2.69	191
New hires were well prepared in basic skills to meet instructional needs of the student population at this school (e.g., English language learners or students from diverse cultural backgrounds).	0.38	0.30	2.25	232
New hires were well prepared to work collaboratively with other teachers.	0.52	0.37	3.58	190

$p \leq 0.05$ if z-score ≥ 1.96.

Chapter 4 – Recruitment

Figure 4-1

Factors Considered by Teachers in Choosing Their Current Jobs

The following table presents the means and standard errors of the responses of teachers who were asked to distribute 100 points to show the relative importance of the following to their decision to choose one job offer over another or others.

Reason for choosing one job offer over another or others. *I took the job at this school because…*	Mean number of points (out of 100) assigned to this reason	Standard error
This school is closer to my current or planned home than the other school is.	21.5	2.54
The grade level/subject areas offered at this school better matched my qualifications and goals than the assignment at the other school.	17.2	2.14
This job offered a higher salary than the job at the other school.	14.5	1.83
I prefer to work with the population of students at this school, compared with those at the other school.	12.0	1.70
I prefer the philosophy of this school's leadership.	9.8	1.80
This school offered more support for professional development than the other school (e.g., strong instructional team, planning time, mentor).	6.5	0.81
This school had more resources than the other school (e.g., materials, technology).	4.9	0.78
This school or community has a better reputation for safety.	3.7	0.87

n=140

Figure 4-2

Groups Targeted for Recruitment, by Percentage of Underprepared Teachers in a District

The following table presents the results of the analysis of the responses of district hiring administrators who recruit and hire teachers, by percentage of underprepared teachers in a district.

In your recruiting, to what extent do you specifically target the following groups?	Percent underprepared teachers in a district	Never	Rarely	Some-times	Always	Row total	n	Chi sq: p=
Experienced teachers from out of state	0% to 10%	30%	22%	34%	14%	100%	235	0.020
	11% to 19%	17%	21%	43%	19%	100%		
	20% or more	18%	17%	37%	28%	100%		
Individuals currently in other professions	0% to 10%	37%	43%	17%	3%	100%	237	0.000
	11% to 19%	18%	39%	41%	1%	100%		
	20% or more	23%	34%	36%	7%	100%		

Figure 4-3

Teacher Recruiting Experiences, by Percentage of Underprepared Teachers in a School

The following table presents the responses of teachers who reported the extent to which they agreed/disagreed with "I felt actively recruited."

Percent of underprepared teachers at a school	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Row total
0% to 10%	6%	14%	14%	26%	40%	100%
11% to 19%	6%	3%	25%	41%	25%	100%
More than 20%	12%	13%	14%	46%	15%	100%

Chi-sq: p=0.000, n=283

The following table presents the responses of teachers who reported the extent to which they agreed/disagreed with "I had a contact person who was accessible."

Percent of underprepared teachers at a school	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Row total
0% to 10%	7%	6%	10%	47%	30%	100%
11% to 19%	4%	7%	8%	50%	31%	100%
More than 20%	9%	14%	18%	47%	12%	100%

Chi-sq: p=0.013, n=286

The following table presents the responses of teachers who reported the extent to which they agreed/disagreed with "All my questions about the process were answered accurately and promptly."

Percent of underprepared teachers at a school	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Row total
0% to 10%	3%	10%	16%	47%	24%	100%
11% to 19%	5%	12%	10%	46%	27%	100%
More than 20%	8%	17%	21%	41%	13%	100%

Chi-sq: p=0.016, n=290

The following table presents the responses of teachers who reported the extent to which they agreed/disagreed with "I was notified about next steps in a timely manner."

Percent of underprepared teachers at a school	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Row total
0% to 10%	0%	15%	19%	43%	23%	100%
11% to 19%	5%	11%	11%	53%	20%	100%
More than 20%	5%	17%	20%	47%	11%	100%

Chi-sq: p=0.004, n=291

The following table presents the responses of teachers who reported the extent to which they agreed/disagreed with "The hiring process was slow and full of obstacles."

Percent of underprepared teachers at a school	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Row total
0% to 10%	23%	44%	20%	10%	3%	100%
11% to 19%	27%	46%	11%	11%	5%	100%
More than 20%	14%	40%	15%	18%	13%	100%

Chi-sq: p=0.029, n=291

Figure 4-4

Extent of Barriers to Hiring Teachers, by Size of District

The following table presents the responses of district hiring administrators who reported the extent to which "Understaffing of the district's human resources or recruiting department" was a barrier to hiring teachers for their districts.

District enrollment	Not at all	Somewhat	Significant	Row total
< 5,000 students	76%	16%	9%	100%
5,001-20,000 students	54%	39%	7%	100%
> 20,000 students	35%	37%	28%	100%

Chi-sq: p=0.000, n=236

The following table presents the responses of district hiring administrators who reported the extent to which "Requirement that positions be open to internal transfer first" was a barrier to hiring teachers for their districts.

District enrollment	Not at all	Somewhat	Significant	Row total
< 5,000 students	66%	19%	15%	100%
5,001-20,000 students	55%	18%	27%	100%
> 20,000 students	39%	46%	16%	100%

Chi-sq: p=0.000, n=237

The following table presents the responses of district hiring administrators who reported the extent to which "The speed of the district's information systems processing of transfers and openings" was a barrier to hiring teachers for their districts.

District enrollment	Not at all	Somewhat	Significant	Row total
< 5,000 students	80%	17%	3%	100%
5,001-20,000 students	62%	31%	8%	100%
> 20,000 students	46%	48%	6%	100%

Chi-sq: p=0.000, n=235

Chapter 5 – Induction

Figure 5-2

Reasons Why Teachers Did Not Participate in BTSA

The following table presents the responses of teachers with 5 or fewer years of classroom teaching experience as of August 1, 2000, who did not receive professional support during their first and/or second year of teaching, or who, if receiving support, did not receive it through the Beginning Teacher Support and Assessment (BTSA) Program.

What are the main reasons you did not participate in the Beginning Teacher Support and Assessment (BTSA) Program?	Percent reporting	Standard error
I did not know about it.	56%	5.79
It was not offered at my school.	32%	6.28
I did not qualify for participation.	22%	6.01
I did not have time.	22%	6.33
I felt that I had enough support in my school and didn't need to participate in the program.	16%	5.43
It was not clear how I would benefit.	16%	5.93
I wanted to but there were not enough slots or enough mentors.	12%	5.65

n=70

Figure 5-3

Induction Support Activities Offered to Beginning Teachers

The following table presents the responses of teachers with 5 or fewer years of classroom teaching experience as of August 1, 2000.

During your 1st and/or 2nd year of teaching, did you receive any of the following types of professional support at your school?	Percent reporting	Standard error
School/district orientation	77%	3.76
School/district workshops for new teachers	77%	3.49
Formal assignment of an experienced teacher to provide mentorship	73%	3.58
Release time to observe other teachers	68%	3.96
Regular meetings between you and other beginning teachers	53%	3.92
Observation of your class by non-administrators	50%	4.10
Coursework on topics such as teaching methods, lesson planning, or discipline, paid for by the school district	43%	4.26
Regular meetings between you and the principal	41%	4.09
Money to buy materials, exceeding the normal budget allotment for other teachers at your school	40%	3.78
Reduced duties (e.g., an extra planning period, no committee assignments)	20%	3.41
Teacher portfolio development	16%	3.23

n=218

Figure 5-4

Teachers Reporting *Monthly/Weekly* Mentor Activities, by BTSA Participation

The following table presents the analysis of the responses regarding participation in mentor activities by teachers with 5 or fewer years of experience.

How often did your mentor engage in this activity with you?	Participation in BTSA	Once/ A few times	About monthly/ At least weekly	Row total	Chi-sq: p=	n
Talked with me about the strengths and/or needs of specific students	Yes	50%	50%	100%	0.010	102
	No	77%	23%	100%		
Visited my classroom during instruction time	Yes	53%	47%	100%	0.001	133
	No	84%	16%	100%		
Talked with me about a classroom observation	Yes	62%	38%	100%	0.009	124
	No	83%	17%	100%		
Invited me into his/her classroom to observe	Yes	65%	35%	100%	0.003	75
	No	93%	7%	100%		

Figure 5-5

Teachers Reporting That They *Never* Received Various Types of Mentor Support, by BTSA Participation

The following table presents the analysis of the responses regarding participation or nonparticipation in mentor activities by teachers with 5 or fewer years of classroom teaching experience.

How often did your mentor engage in this activity with you?	Participation in BTSA	Never	At least once*	Row total	Chi sq: p=	n
Demonstrated lessons for me in the classroom	Yes	40%	60%	100%	0.000	158
	No	77%	23%	100%		
Helped me develop a professional growth plan	Yes	35%	65%	100%	0.000	158
	No	77%	23%	100%		
Planned lessons with me	Yes	45%	55%	100%	0.018	156
	No	67%	33%	100%		
Conducted formal observations in my classroom	Yes	9%	91%	100%	0.000	158
	No	63%	37%	100%		
Talked with me about the strengths and/or needs of specific students	Yes	19%	81%	100%	0.000	157
	No	50%	50%	100%		
Talked with me about a classroom observation	Yes	8%	92%	100%	0.001	157
	No	38%	62%	100%		
Visited my classroom during instruction time	Yes	5%	95%	100%	0.000	158
	No	31%	69%	100%		

**Includes respondents who answered "Once," "A few times," "About monthly," and "At least weekly."*

Figure 5-6

Contributions of Induction Support Activities to Teaching

The following table presents the responses of teachers with 5 or fewer years of classroom teaching experience as of August 1, 2000, who received professional support during their first and/or second year of teaching.

In thinking about the support that was provided to you during your 1st and/or 2nd year of teaching, please indicate the extent to which it made the following contributions to you as a teacher. *The support I received during my first year(s) of teaching specifically…*	Percent reporting "A lot"	Standard error for "A lot"	Percent reporting "Some-what"	Standard error for "Some-what"	n
Improved my classroom management, allowing me to try new instructional activities.	42% (87)	4.25	34% (68)	4.18	211
Helped me ask for additional assistance and feedback when I needed it.	39% (71)	3.50	30% (53)	3.38	180
Helped me understand the way my school/district and its administration worked.	34% (66)	3.36	29% (55)	3.61	182
Improved my skills to meet instructional needs of the student population at this school (e.g., English language learners or students from diverse cultural backgrounds).	32% (68)	3.81	30% (60)	3.82	211
Increased my effectiveness at promoting student learning.	30% (70)	3.64	41% (76)	4.14	210
Increased my knowledge beyond the basic instructional and assessment techniques that are appropriate for the subject matter I taught.	29% (54)	3.17	40% (70)	4.68	182
Improved my ability to consistently identify instructional goals appropriate to the subject matter I taught.	28% (55)	3.56	35% (60)	4.29	182
Increased my confidence and responsiveness in interactions with parents.	27% (49)	2.49	32% (54)	3.66	181
Deepened my grasp of the subject matter I taught.	21% (48)	4.17	33% (65)	3.66	211

Note: Numbers of respondents are in parentheses.

Figure 5-7

Percentage of Beginning Teachers Reporting Mentor Support Activities as Very Valuable, by Frequency of Activity

The following table presents the analysis of the responses regarding the value of mentor support activities by teachers with 5 or fewer years of classroom teaching experience who engaged in such activities.

How valuable was this activity for your professional development?	Frequency of activity	Not/ Somewhat valuable	Very Valuable	Row total	Chi sq: p=	n
Visited my classroom during instruction time	Once/A few times	75%	25%	100%	0.000	116
	At least monthly	17%	83%	100%		
Conducted formal observations in my classroom	Once/A few times	57%	43%	100%	0.001	99
	At least monthly	12%	88%	100%		
Talked with me about a classroom observation	Once/A few times	55%	45%	100%	0.000	110
	At least monthly	9%	91%	100%		
Helped me develop a professional growth plan	Once/A few times	67%	33%	100%	0.004	69
	At least monthly	11%	89%	100%		
Demonstrated lessons for me in the classroom	Once/A few times	54%	46%	100%	0.018	58
	At least monthly	0%	100%	100%		
Prepared/sent me materials	Once/A few times	54%	46%	100%	0.004	111
	At least monthly	18%	82%	100%		
Planned lessons with me	Once/A few times	47%	53%	100%	0.029	65
	At least monthly	7%	93%	100%		
Talked with me about the strengths and/or needs of specific students	Once/A few times	45%	55%	100%	0.001	92
	At least monthly	6%	94%	100%		

Figure 5-8

Mean Effectiveness of Induction Support, by BTSA Participation

The following table presents the analysis of mean responses regarding the effectiveness of induction support by teachers with 5 or fewer years of classroom teaching experience.

In thinking about the support that was provided to you during your 1st and/or 2nd year of teaching, please indicate the extent to which it made the following contributions to you as a teacher. *The support I received during my first year(s) of teaching specifically…*	Participation in BTSA	Mean response*	p-value	n
Improved my classroom management, allowing me to try new instructional activities.	Yes	3.3	0.008	159
	No	2.8		
Increased my effectiveness at promoting student learning.	Yes	3.2	0.002	158
	No	2.8		
Increased my knowledge beyond the basic instructional and assessment techniques that are appropriate for the subject matter I taught.	Yes	3.1	0.011	140
	No	2.6		
Improved my skills to meet instructional needs of the student population at this school (e.g., English language learners or students from diverse cultural backgrounds).	Yes	3.0	0.009	159
	No	2.5		

**Scale is: 1=Not at all; 2=A little; 3=Somewhat; 4=A lot.*

Chapter 6 – Professional Development

Table 6-1

Professional Development Activities Reported by Teachers

The following table presents the standard errors for the responses of teachers with at least 1 year of teaching experience for the years 1997-98 and 1999-2000.

Thinking back to last school year, in which of the following activities related to teaching did you participate (as a participant, not as an instructor or facilitator)?	Percent participating in 1997-98	Standard error for 1997-98	n for 1997-98	Percent participating in 1999-2000	Standard error for 1999-2000	n for 1999-2000
Workshops and training offered by school or district	92%	1.22	656	94%	1.08	586
Workshops by outside consultants	87%	1.48	656	NA	-	-
Regularly scheduled collaboration with other teachers	74%	2.19	656	76%	2.66	581
Independent professional reading	71%	2.38	654	76%	1.73	583
School or district committee on a topic related to curriculum and instruction	61%	2.73	656	66%	2.43	581
Subject-matter professional association activities	47%	2.72	655	48%	3.29	582
Individual or collaborative research	37%	2.36	656	36%	2.06	579
University extension or adult education courses	29%	1.83	656	30%	2.49	580
California Subject Matter Projects	22%	2.30	655	19%	1.89	581
Graduate courses in academic subject area	18%	1.67	656	18%	1.50	571
Professional Development Institutes	NA	-	-	7%	1.15	570

Note: NA is "Not asked."

Note: Percentages are based on weighted data.

Figure 6-1

Prevalence of Certain Characteristics of Professional Development, 1997-98 and 1999-2000

The following table presents the percentages and standard errors for the responses of teachers with at least 1 year of teaching experience for the years 1997-98 and 1999-2000.

In general, professional development available to teachers at this school…	Year of participation	Percent reporting "Often"	Standard error for "Often"	Percent reporting "Very often"	Standard error for "Very often"	n
Promotes collaboration among teachers.	1997-98	33%	2.36	12%	1.65	589
	1999-2000	31%	1.93	15%	1.52	574
Focuses on subject-matter content.	1997-98	33%	2.70	8%	1.29	588
	1999-2000	30%	1.83	12%	1.54	572
Recognizes and builds on individual teachers' knowledge and experience.	1997-98	28%	2.21	8%	1.32	588
	1999-2000	29%	2.76	7%	1.27	573
Meets the needs I have in my current teaching assignment(s).	1997-98	20%	2.13	6%	1.23	587
	1999-2000	25%	1.61	7%	1.37	573
Is sustained over time, with ample participant follow-up and teacher support.	1997-98	15%	1.90	4%	0.87	584
	1999-2000	18%	1.55	5%	1.05	573
Is a series of single events with little or no follow-up.	1997-98	30%	2.35	12%	1.57	588
	1999-2000	30%	2.78	9%	1.03	573

Figure 6-2

Teacher Reports on Contribution of Professional Development

The following table presents the percentages and standard errors for the responses of teachers with at least 1 year of teaching experience who participated in professional development activities.

Please indicate the extent to which participation in these activities has made the following contributions to you as a teacher.	Percent reporting "A lot"	Standard error for "A lot"	Percent reporting "Somewhat"	Standard error for "Somewhat"	n
Increased my effectiveness at promoting student learning.	24% (148)	1.75	47% (251)	2.50	567
Increased my knowledge beyond basic instructional and assessment techniques appropriate for the subject matter I teach.	23% (117)	1.94	38% (187)	2.73	496
Deepened my grasp of the subject matter I teach.	22% (133)	2.20	35% (194)	2.19	568
Improved my ability to consistently identify instructional goals appropriate to the subject matter I taught.	21% (111)	1.87	40% (193)	2.64	495
Improved my skills to meet instructional needs of the student population at this school (e.g., English language learners or students from diverse cultural backgrounds).	20% (116)	1.88	38% (215)	2.11	567
Improved my classroom management, allowing me to try new instructional activities.	16% (95)	2.20	35% (189)	2.63	566
Increased my confidence and responsiveness in interactions with parents.	13% (67)	1.54	26% (126)	2.43	488

Note: Number of respondents in parentheses.

Figure 6-3

Locus of Decision-making, by School Level

The following table presents the analysis of the responses regarding the responses of teachers with at least 1 year of teaching experience, by grade level.

To what extent do the following describe the professional development you participated in during the 1999-2000 school year?	Grade level	Not at all	Somewhat	Moderately	Greatly	Row total	Chi -sq: p=	n
The district/school required my participation in specific activities, e.g., about a newly adopted textbook or in a high-priority content area such as reading.	K-5	17%	22%	30%	31%	100%	0.006	494
	6-8	24%	23%	20%	33%	100%		
	9-12	40%	25%	16%	19%	100%		
I sought out whatever training I wanted or needed outside of the district.	K-5	34%	32%	18%	16%	100%	0.042	495
	6-8	24%	35%	22%	19%	100%		
	9-12	21%	29%	33%	17%	100%		
Our school or grade-level/subject team decided collectively and obtained the desired support for the group.	K-5	32%	29%	23%	16%	100%	0.011	494
	6-8	39%	27%	24%	10%	100%		
	9-12	50%	25%	19%	6%	100%		

Table 6-3

Additional Professional Development Responsibilities Undertaken by Teachers

The following table presents the standard errors of the responses of teachers with at least 1 year of teaching experience regarding their participation in professional development activities.

Do you have any of the following responsibilities during this school year (2000-01)? How many hours per week, on average, are you currently spending on each activity?	Teachers participating	Standard error for participation	n	Mean hours per week per participant	Standard error for mean hours	n
Providing workshops and other training for teachers in your school or district	22% (88)	2.10	403	2.8 (31)	0.56	88
Serving as a master or supervising teacher for preservice student teachers	14% (54)	2.10	394	14.0 (46)	1.69	54
Mentoring interns, pre-interns, emergency-credentialed teachers, or new teachers *not* in BTSA	13% (56)	1.84	387	3.7 (45)	0.60	56
Being a BTSA support provider/mentor	9% (37)	1.98	393	3.1 (35)	0.48	37

Note: Numbers of respondents are in parentheses.