Teaching and California's Future

The Status of the Teaching Profession 2003
Research Findings and Policy Recommendations

The Center for the Future of Teaching and Learning

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California State University, Office of the Chancellor
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Task Force Members

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Edward Teller Education Center

Co-Chair:
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University of California, Santa Cruz

Bob Cherry, Associate Executive Director
California Teachers' Association

Phil Daro, Director
Public Forum on School Accountability

Sandy Dean, Teacher
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National Writing Project
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Susan Stickel, Deputy Superintendent
State Superintendent of Public Instruction

Jerry Swanitz, Vice Principal
Santa Ynez High School

Arthurlene Towner, Dean
School of Education and Allied Studies
California State University, Hayward

Aida Walqui, Director of Teacher Development Programs
WestEd

Advisors

Stephen Blake, Chief Consultant
K-16 Master Plan Committee

Linda Bond, Director of Governmental Relations
California Commission on Teacher Credentialing

Davis Campbell, President
Governance Institute, California School Boards Association

Linda Darling-Hammond, Professor
Stanford University School of Education

Carolyn Ellner, President
On the Job Parenting

Ken Futernick, Professor of Education
California State University, Sacramento

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Policy Analysis for California Education

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John Mockler and Associates

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Assembly Education Committee

Richard Simpson, Policy Director
Office of the Speaker of the Assembly

Jim Wilson, Staff Director
Senate Education Committee

Beverly Young, Assistant Vice Chancellor
Teacher Education and Public School Programs
California State University System

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Executive Summary

Over the past 6 years, *Teaching and California's Future* has documented key trends in the status of the California teacher workforce. In particular, this initiative has illuminated the critical shortage of fully credentialed teachers and the unfair concentration of underprepared teachers in our state's most vulnerable schools. These problems did not go unnoticed by policy-makers, who by school year 2000-01 put in place a number of initiatives intended to increase the flow of fully prepared teachers into the system and to provide increased support to retain teachers. In addition, policy-makers took action to bring coherence and higher quality to the training that experienced teachers receive to help them develop professionally.

There is evidence that these policies were beginning to have their intended effect. The number of newly prepared teachers increased, and the number of underprepared teachers in the state's classrooms finally began to go down in 2001-02. At the same time, more underprepared teachers were receiving structured support, more teachers in their first years were given induction support, and content-focused professional development reached greater numbers of teachers.

However, the California context has shifted dramatically in the past year. The state now struggles with a weak economy, reduced state revenues, and a soaring budget deficit. As a result, many of the recent policy initiatives have been undermined: there is no longer support for teacher recruitment efforts, teacher education programs are facing limits on enrollment, and funding for state-sponsored professional development has been dramatically reduced.

Ironically, the same forces that threaten the state's progress in strengthening the system of teacher development may have some positive impacts: as the state economy weakens, private-sector jobs become more scarce, making teaching a more attractive profession for recent college graduates. Also, fewer teachers may be leaving the profession and more may be reentering the teacher workforce, helping to further alleviate the shortage.

These developments are occurring alongside the implementation of the federal No Child Left Behind (NCLB) Act and its requirement that all teachers be "highly qualified." California policy-makers have interpreted "highly qualified" to include fully credentialed teachers and interns. These new requirements are motivating teachers without credentials to seek proper qualifications and pressuring school districts to recruit, hire, and retain qualified candidates.

Taken together, these economic and policy shifts appear to be reducing the number and percentage of teachers in the state who have not completed a preparation program and are not in some structured support program. The shortage problem has not been resolved, however. Large numbers of underprepared teachers remain in California's classrooms, and they remain concentrated in schools serving the students most likely to be challenged by the state's high standards.

Teaching and California's Future

As California has struggled through these economic and policy shifts, the *Teaching and California's Future* initiative has worked 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 in strengthening schools. Led by the Center for the Future of Teaching and Learning and cosponsors—California State University Office of the Chancellor, Policy Analysis for California Education (PACE), University of California Office of the President, and WestEd—the initiative has 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) supporting an ongoing comprehensive study of the conditions of teacher development in the state 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.

The results of this work have been published in a series of reports released each December beginning in 1999 (Shields et al., 1999, 2000, 2001; Center for the Future of Teaching and Learning, 2002). During the 2002-03 school year, SRI International launched a third comprehensive round of data collection, including a statewide survey of K-12 teachers and in-depth case studies of four local systems of teacher development, including profiles of 35 target teachers who were interviewed at regular intervals and who maintained weekly logs of their teacher training and professional development experiences. This document includes the findings from these data collection efforts and from analyses of secondary databases in the state, as well as detailed recommendations.

Demand for and Distribution of Teachers

In terms of credential status, the teacher workforce shows signs of improvement, and many of the trends of previous years appear to be reversing. The number and percentage of underprepared teachers in the state dropped slightly, from 41,713 in 2001-02 to 37,300 in 2002-03, or about 12% of the workforce. Early indications from fall of 2003-04 suggest that this number will continue to drop, perhaps substantially. Of the remaining underprepared teachers in the workforce, a greater percentage are participating in intern programs—about 7,500 in 2002-03, or a fifth of all underprepared teachers. This number has been growing steadily and is expected to grow still more because interns are considered "highly qualified" under NCLB. Pre-interns, on the other hand, are not considered highly qualified, and saw their numbers drop slightly, from about 9,900 in 2001-02 to about 8,800 in 2002-03, or 24% of all underprepared teachers. Under NCLB, the pre-intern program is likely to decrease in size further and/or change its focus in future years.

Still, despite the progress that has been made, underprepared teachers in the workforce continue to be maldistributed—that is, they are concentrated unfairly in special education classrooms and in schools serving low-income, minority, low-achieving, or English language learner students. In 2002-03, the most recent year for which data are available:

- Eighteen percent of all special education teachers did not hold a full teaching credential.
- Schools serving high proportions of minority students had an average of 20% underprepared teachers on staff, compared with only 4% in schools serving low proportions of minority students. Similar patterns are found when the data are disaggregated by student poverty level and school achievement as measured by the API.
- Schools serving high proportions of English language learners had an average of 16% underprepared teachers on staff, compared with 7% in schools serving few or no English language learners.

Although this maldistribution has become less severe in recent years, the historical pattern points to a chronic problem: when the number of underprepared teachers rises, schools serving poor, minority, and low-performing students are the most affected, while schools serving more advantaged populations manage to maintain relatively low numbers of underprepared teachers.

After a period of severe shortage in the late 1990s, the demand for new teachers appears to be diminishing somewhat. This decrease is due, in part, to slowed growth in student enrollment. After increasing by 23% over the past 10 years, enrollment is expected to peak in 2007-08. However, a countervailing demographic trend may keep demand for new teachers high. About 100,000 teachers in today's workforce are age 50 or older and are likely to retire in the next 10 years. This development will create the need to prepare, recruit, and induct thousands of new teachers. Also, NCLB is increasing the demand for credentialed teachers. Under this law, all core subject teachers in Title I schools should now be highly qualified; by 2005-06, core subject teachers in all schools must be highly qualified.

Teacher Preparation

California's teacher preparation system is facing two significant changes. First, NCLB is creating greater demand for credential production. Second, SB 2042 is attempting to improve teacher quality by redesigning the teacher preparation and induction processes, and includes plans for a new Teaching Performance Assessment (TPA). Both of these policy changes are likely to place greater demands on teacher preparation programs. At the same time, budget cuts to the state's public universities are likely to limit program capacity and possibly student enrollment.

In past years, policy-makers responded to the rising demand for new teachers by increasing the capacity of the teacher preparation system, including the implementation of alternative-route programs. This action resulted in an increase of new credentials, from just under 13,000 in 1994-95 to just over 23,000 in 2001-02. This number is expected to remain high in the short term but may drop if demand for teachers is perceived as lessening or if budget cuts limit capacity. Part of the strategy for increasing credential production has been to expand intern programs. These programs have grown in funding and participants in recent years, and may continue to

do so as underprepared teachers are pressured to get intern credentials to meet NCLB requirements. Less progress has been made in the production of special education teachers. Credential numbers for these teachers have not risen as much as among the general education teacher population, and the small growth that has occurred has been largely in intern credentials rather than preliminary credentials.

As the state continues its struggle to prepare adequate numbers of teachers, it also must be concerned with the quality of their preparation. The quality of teacher preparation is difficult to assess, however. The one constant finding about teacher preparation is the variation that teachers experience, across preparation routes and programs, and even from class to class within a single program. Although many teachers feel that overall they were prepared adequately by their preparation programs, few feel their preparation helped them a lot. In particular, few teachers feel well prepared to use assessment data, adapt instruction for special education students, and meet the instructional needs of all the students at their school, including English language learners. Participants in all routes give mixed reviews of their teacher preparation coursework and the quality of their student teaching experience.

In general, teachers following traditional and alternative routes into the profession rate the quality of their overall preparation about the same, but teachers in alternative routes do have disadvantages in some key areas. First, alternative-route teachers report being especially burdened with the demands of simultaneously teaching and taking courses. Second, alternative-route teachers also student teach in the classroom of a veteran teacher less often and collaborate with and observe their supervising teacher less often. Third, unlike fully credentialed teachers, who are eligible for BTSA, pre-interns and teachers on emergency permits typically do not receive mentoring or other formal on-the-job supports in their first years. Although most interns are provided with a mentor, the quality of the experience varies.

Teacher Induction

California has the country's largest and best-funded induction program for beginning teachers. Indeed, even in this time of deep budget cuts, California continues to invest heavily in the Beginning Teacher Support and Assessment (BTSA) program. This commitment is reinforced in legislation (SB 2042) that institutionalizes induction as part of the "learning to teach" continuum and establishes it as part of the path to the professional clear credential. Since the inception of BTSA, the proportion of beginning teachers participating in the program has continued to increase. However, not all beginning teachers are eligible; the program was not designed for and typically does not serve those who do not have full credentials. In 2002-03, 42% of first- and second-year teachers did not have either a preliminary or professional clear credential and so were not eligible for BTSA. These underprepared teachers are disproportionately concentrated in schools serving poor, minority, and low-performing students. Once these underprepared teachers acquire full credentials, they are eligible for BTSA; however, some who have years of teaching experience report that by the time they are eligible, BTSA no longer meets their professional needs.

Whether in BTSA or not, almost all teachers (96%) receive some form of induction support in their first years on the job. Nearly three-quarters of new teachers report being assigned a mentor, being observed by nonadministrators, and receiving release time to observe other colleagues. The types of mentor support new teachers most often report as very valuable are: consulting on the needs of students, talking with mentors about classroom observations, and having mentors demonstrate lessons. Of the new teachers who are assigned a mentor, however, many report infrequent mentor support, and new teachers' feelings about the value of mentor support vary by the frequency with which they interact with their mentor. Teachers who participate in BTSA are more likely than nonparticipants to report receiving most types of mentor support.

Implementation of BTSA at the local level varies a great deal, in part because of districts' varying capacities. One challenge for some districts is a shortage of experienced teachers to serve as mentors; this is particularly a problem in schools serving poor, minority, and low-performing students. Also, districts rarely do an adequate job of inducting teachers without full credentials. Even in districts that have strong formal induction programs, support for underprepared teachers is often inadequate.

BTSA and other formal induction efforts ultimately aim to support beginning teachers, improve their practice, and retain them in the profession. In terms of impact on practice, teachers report that their induction experience contributed modestly to their professional growth. The impact of BTSA on teacher retention is virtually impossible to measure reliably, however, because in California there is no statewide database that can track whether teachers stay in the profession.

Teacher Professional Development

The economic downturn of the past few years has resulted in the elimination or reduction in scope and funding of the state's professional development initiatives. The California Professional Development Institutes (CPDI) no longer receive state funding. The California Subject Matter Projects (CSMP), Peer Assistance and Review (PAR), and Mathematics and Reading Professional Development Program (AB 466), meanwhile, have all seen their budgets reduced by at least 50% for fiscal year 2003-04.

More so than in previous years, teachers in 2003 report participating in professional development activities that reflect the characteristics of high-quality professional development, including opportunities that build on individual teachers' knowledge, promote collaboration among teachers, and focus on subject matter content. Two models of school-based professional development—coaching and professional collaborative work time—demonstrate these qualities when implemented in schools with supportive leaders and working conditions. However, the percentage of teachers participating in high-quality professional development is still low, and, overall, teachers report only a moderate impact from their professional development activities—a finding consistent with previous surveys of California's teachers.

California policy-makers face several challenges in trying to provide effective, relevant professional development for the state's teachers. State and federal standards-based reform and testing requirements have narrowed the breadth of professional development offerings, with both positive and negative effects. On one hand, language arts and mathematics are receiving the attention they need; and professional development is finally being aligned to other cornerstones of California education policy, namely, content standards and the assessment system. On the other hand, other subject areas are being neglected at the expense of focusing on reading and math. In some places, these efforts focus on curriculum so much that they divert attention from instruction. In addition, the diversity of the workforce, in terms of teacher experience, assignment, and location, creates problems for developing statewide professional development initiatives that are applicable and meaningful to all teachers. The local context also plays an important role: poor working conditions, competing time demands, contradictory messages about effective instructional strategies, and the overrepresentation of beginning teachers in low-performing schools can negatively affect learning opportunities for teachers.

One of the greatest shortcomings of professional development in California is its failure to assist teachers in instructing students with special needs. Most teachers (88%) report having special education students in their classrooms, but few of these teachers indicate that they have sufficient supports or training to adapt instruction for these students. In addition, most teachers (87%) report having English language learners in their classrooms, but fewer than half of these teachers indicate that they have sufficient preparation and training to teach this population of students.

Recommendations

Policy-makers are urged to consider the following recommendations derived from these findings.

Preparing and Licensing Teachers

1. The California Commission on Teacher Credentialing should eliminate, by September 1, 2005, emergency permits for special education teachers and, to that end, move current permit holders into intern programs within 1 year.

2. The California Commission on Teacher Credentialing and the State Superintendent of Public Instruction should take all appropriate steps to ensure that school districts use remaining pre-intern funds to accelerate the progress of special education emergency-permit holders toward a full credential.

3. The Governor and the Legislature should immediately conduct a formal review of the quality and effectiveness of teacher intern programs. The expansion of and support for intern programs should be based on the results of this review. In addition, the California Commission on Teacher Credentialing should take all appropriate steps to ensure that these programs provide consistently high-quality preparation and mentoring. The Commission should pay special attention to beginning teachers' transition between participation in intern and

induction programs, eliminating redundancies in responsibility and content and better meeting the needs of teachers who are entering the profession through alternative routes.

4. The California Commission on Teacher Credentialing and the State Board of Education should collaborate to align standards for teacher development programs, performance assessments (including the Teaching Performance Assessment), and accountability measures to ensure that programs for beginning teachers are effective and reflect the components of the state's student academic achievement system.

Ensuring an Adequate Supply of Teachers

5. The Governor should include in his budget funds for the Chancellor of the California State University and the President of the University of California to create incentives to develop and implement regional campus programs for preparing an adequate supply of teacher candidates for high-need geographic and subject areas, including special education, English language instruction, mathematics, and science.

6. The Legislative Budget Committees should evaluate, as part of their regular deliberations on the 2004-05 Governor's Budget, the existing statutory incentives for teacher recruitment, including the Assumption Program for Loans in Education, CalTeach, Cal Grant T, the Governor's Teaching Fellowship awards, Regional Teacher Recruitment Centers, and the Teaching as a Priority Block Grant program, to determine which efforts have improved the recruitment and hiring of fully qualified teachers in low-performing and hard-to-staff schools. The Legislature should restore funding to those efforts found to be most effective.

Building Teachers' Skill and Knowledge

7. Beginning in June 2004, the Governor and the State Superintendent of Public Instruction should direct a portion of the Mathematics and Reading Professional Development Program (AB 466) funds toward training special education teachers in integrating the state's student academic standards and adopted curricular materials into their instruction. First priority should be given to emergency-permit holders and interns who teach in high-poverty, hard-to-staff schools.

8. In 2004, the State Superintendent of Public Instruction should establish as a first priority the development of high-quality professional development for school-based teams of classroom teachers at the Reading Implementation Centers. These teams will be responsible for adapting curriculum and instruction to accommodate special-needs students in reading. This strand of professional development should be designed jointly with leaders of effective, district-sponsored programs and accomplished, veteran special and general education teachers.

Including in Teacher Development All Curriculum Areas Required for Graduation

9. The State Superintendent of Public Instruction, in collaboration with the University of California Office of the President and the California Subject Matter Projects, should develop and implement a teacher professional development cycle that addresses all subject matter content required for high school graduation and California public university admission. The cycle should coincide with the state's textbook adoption cycle and include language arts, mathematics, science, history, foreign language, and visual and performing arts. Within each subject matter area, the unique pedagogical needs of teachers of special education students and English language learners should be recognized and accommodated.

10. The Governor should restore full funding for the California Subject Matter Projects in all content areas specified in the 4-year California public university A through G admission requirements.

Working toward Better Management of the State's Resources

11. The Superintendent of Public Instruction should conduct a thorough review of the Education Code provisions related to teacher professional development and recommend to the Legislature statutory changes needed to (1) eliminate those professional development requirements that are redundant or ineffective, and (2) consolidate the remaining programs into professional development block grants that are responsive to both state priorities and the need for local flexibility.

12. The Governor and the Legislature should establish a state-level, independent organization composed of representatives from agencies that collect data on the teacher workforce to oversee and strengthen the state's teacher data collection and reporting system. This independent entity would ensure that data collection procedures allow for timely, accurate analysis of longitudinal teacher supply and demand information, provide coordination among agencies, and provide state policy-makers with annual analyses of these data.

Building a Teacher Development System

In addition, it is urged that the Governor and the Legislature give priority, over the next 2 years, to the development of a comprehensive and coherent system of teacher development for the state. It is recommended that:

13. The Secretary of Education convene a working group to develop and recommend to the Governor and the Legislature specific steps needed to build on the existing framework for teacher preparation (SB 2042) and professional development (Morgan-Hart Act, SB 1882) to establish a cohesive, accountability-based system of teacher development that includes preparation (subject matter content and pedagogical knowledge, and student teaching), recruitment, support for all beginning teachers, and ongoing professional development.

14. The Secretary of Education consider and extend the work of the K-16 Master Plan Committee, the Task Force on Recruitment, Preparation and Retention of Special Education Teachers, and other relevant entities.

15. The Secretary of Education give the highest priority to ensuring that the state's programs for teacher preparation (including CLAD, BCLAD, and requirements for the preliminary teaching credential), induction (including the CFASST system), and professional development focus on a coordinated, consistent approach to providing teachers with the content knowledge and pedagogical skills needed to help all students, including special education students and English language learners, meet the state's high academic standards.

1. Introduction

At this time of leadership change and increasingly tight budget constraints, California's policy-makers and public remain firmly committed to the continued improvement of the state's educational system. Indeed, the call is for higher standards and increased accountability for results, not a retreat from the last half-dozen years' reforms. In line with the federal No Child Left Behind (NCLB) legislation, California has resolved to get 100% of students proficient on assessments based on the state's ambitious standards (versus fewer than 20% that currently perform at that level). At the same time, the new legislation requires not only that all schools have to meet standards for average achievement—as has been true for a number of years—but that they must ensure that all subgroups (e.g., English language learners, special education students) meet state goals as well. Sanctions for low-performing schools, including the requirement that their students be given the choice to attend other public schools, have become more severe and go into effect more quickly.

The commitment to higher standards and increased accountability is accompanied by a renewed focus on the quality of the teacher workforce. No Child Left Behind calls for all teachers in the state to be "highly qualified" by school year 2005-06. The pending reauthorization of the Individuals with Disabilities Act (IDEA) will also address the issue of teacher quality.

But state policy-makers' concerns about the strength of the teacher workforce precede the recent federal legislation. In the wake of class size reduction in 1996-97, which created the demand for an additional 18,000 teachers, policy-makers struggled to attract a sufficient number of fully prepared teachers, those who have demonstrated subject matter competence and pedagogical knowledge, and have practiced these skills under supervision before having a class of their own. The shortage of fully prepared teachers was exacerbated by the growth in student enrollment and a strong state economy that made private-sector jobs attractive to recent college graduates. By the fall of 2000, more than 42,000 teachers, about one in every eight, had not completed a preparation program before beginning to teach. These underprepared teachers were concentrated in the schools serving the state's poorest and lowest-achieving students—raising questions about the fairness of a system that was increasing pressure for students to achieve to high standards while providing the lowest achievers with the least prepared teachers.

In response to their concerns, policy-makers put in place a number of initiatives by school year 2000-01 intended to increase the flow of fully prepared teachers into the system and to provide increased support to teachers to retain them in the profession and better prepare them to meet students' needs:

- Increased production of fully credentialed teachers from the state's public university system.
- Expansion of both the pre-intern and intern programs to support individuals already teaching without a full credential.

- Investments in efforts to recruit teachers into the profession, especially in low-achieving schools.
- Continued expansion of the formal induction program for first- and second-year teachers.
- The design of a two-tier credentialing system that calls for the completion of a beginning-teacher induction program to earn a professional credential.
- Expansion and strengthening of the state's support for professional development through summer institutes, subject-matter specific professional development, and funds to local districts to help teachers learn to use new curricula.

As we will discuss later, there is evidence that these policies were beginning to have their intended effect. The number of newly prepared teachers increased, more teachers in their first years were given induction support, more underprepared teachers were receiving structured support, and content-focused professional development reached greater numbers of teachers. Overall, the number of underprepared teachers in the state's classrooms finally began to decline in 2001-02.

Yet the California context has shifted dramatically in the past year. The state is struggling with a weak economy, state revenues are down considerably, and the budget deficit is soaring. As a result, many of the recent policy initiatives have been undermined: there is no longer support for teacher recruitment efforts, teacher education programs are facing enforced limits on enrollment, and state-sponsored professional development has been dramatically reduced. Ironically, the same forces that threaten the state's progress in strengthening the system of teacher development may have some positive impacts: as the state economy weakens, private-sector jobs are in short supply, making teaching a more attractive profession for recent graduates. In fact, we will present data that suggest that fewer teachers may be leaving the profession and/or more teachers reentering the teacher workforce.

These developments are occurring alongside the implementation of No Child Left Behind and its requirement that all teachers be "highly qualified." California policy-makers have interpreted "highly qualified" to include both fully credentialed teachers and interns–individuals who have demonstrated subject matter competence and who are in a structured program to complete their preparation for a credential. We will present data that suggest that these new requirements may be motivating teachers without credentials to seek proper qualifications and motivating school districts to seek qualified candidates.

Taken together, these economic and policy shifts appear to be leading to the reduction in the number and percentage of teachers in the state who have not completed a preparation program and are not in some structured program of support. But, as we will show in the next chapter, large numbers of underprepared teachers remain in California classrooms, and they remain concentrated in schools serving the students most likely to be challenged by the state's high standards.

Teaching and California's Future

Over the past 6 years, as California has struggled through these economic and policy shifts, the *Teaching and California's Future* initiative has worked 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 to strengthen schools. 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 has 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) support for an ongoing comprehensive study of the conditions of teacher development in the state 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.

The results of this work have been published in a series of reports issued each December beginning in 1999 (Shields et al. 1999, 2000, 2001; Center for the Future of Teaching and Learning, 2002). These reports have 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 *Teaching and California's Future* Task Force leadership has developed a set of key goals to guide the initiative:

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

These goals, the strength of the data on which they were based, and the goodwill and efforts of the Task Force membership have combined to help shape the policy debate over the past few years.

Data Collection

During the 2002-03 school year, SRI International launched a third comprehensive round of data collection. This work included a statewide survey of a representative sample of K-12 teachers, focusing on teachers' preparation, job search, induction, workplace support, and professional development.

To complement the statewide data gathered through the survey, SRI conducted in-depth case studies of four 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.

In each local system, we identified a set of target teachers (8 to 9, for a total of 35 teachers) who were interviewed at regular intervals and who maintained weekly logs of their professional development and preparation experiences.

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

Organization of the Report

This document includes the main research findings of Teaching and California's Future and the detailed recommendations. The remainder of the document is organized into five chapters. The first addresses the status of the teacher workforce, with a focus on shifts in the number and distribution of underprepared teachers. The second tracks the system of teacher preparation, including an extensive analysis of alternative pathways into the teaching profession. The third describes the study's findings on the system of induction into the profession for new teachers. The fourth concentrates on the professional development system. The final chapter summarizes the findings and includes recommendations. The three appendices provide information on data collection methods and analyses, technical information for figures and tables found in Chapters 2 through 5, and supplemental figures for Chapter 2.

2. Teacher Distribution and Demand

Underprepared teachers

- In 2002-03, there were about 37,300 underprepared teachers in the workforce, or about 12%, down from 14% 2 years earlier. There are early indications that the number of underprepared teachers has dropped significantly more in 2003-04.
- In 2002-03, there were about 7,500 interns, or 20% of all underprepared teachers, up from 11% of all underprepared teachers in 1997-98. Because interns are considered "highly qualified" under the federal No Child Left Behind Act (NCLB), their numbers are likely to grow in future years.
- In 2002-03, there were about 8,800 pre-interns, or 24% of all underprepared teachers, up from 3% of all underprepared teachers in 1998-99, the first year of the program. Because pre-interns are not considered highly qualified under NCLB, the pre-intern program is likely to decrease in size and/or change its focus in future years.

Distribution

- Historically, when the number of underprepared teachers has risen, schools serving the least prepared students have been most affected.
- Although the maldistribution of underprepared teachers has been improving over the past few years, underprepared teachers are still inequitably distributed.
- In 2002-03, schools serving high proportions of minority students had an average of 20% underprepared teachers on staff, compared with only 4% in schools serving low proportions of minority students.
- In 2002-03, schools serving high proportions of English language learners had an average of 16% underprepared teachers on staff, compared with 7% in schools serving few or no English language learners.
- Special education suffers from the greatest shortage of fully credentialed teachers: in 2002-03, 18% of all special education teachers did not hold a full teaching credential.

Demand for teachers

- Student enrollment in California schools increased by 23% over the past 10 years, driving up the demand for more teachers. Looking ahead, enrollment growth is expected to slow, peaking in 2007-08.
- An impending bulge in teacher retirement may create significant new demand for teachers. About 100,000 teachers are 50 or older and are likely to retire in the next 10 years.
- No Child Left Behind will also increase the demand for credentialed teachers. Currently, core subject teachers in Title I schools should be highly qualified; by 2005-06, core subject teachers in all schools must be highly qualified.

In the wake of class size reduction and a steady rise in student enrollment during the 1990s, the demand for teachers in California public schools skyrocketed. At a time when the California economy was growing rapidly, schools and districts struggled to find enough qualified candidates to fill the growing number of classrooms. The *Teaching and California's Future* initiative has been tracking the status of the teaching profession since 1999. In earlier reports, we have documented this growth in the teacher workforce, the increasing reliance of schools on underprepared teachers who have not yet completed their preparation, and the concentration of these teachers in schools serving poor, minority, and low-achieving students.

Recently, a number of developments have pointed to a slowing or even a reversal of these trends. In our 2002 report, we showed a reduction in the number of underprepared teachers for the first time since class size reduction (Center for the Future of Teaching and Learning, 2002). In this chapter, we continue the investigation of trends in the California teacher workforce, discussing the potential impact of projected slower student growth, a weak economy, and the new federal No Child Left Behind (NCLB) legislation.

We begin the chapter with a discussion of the definition of underprepared teachers. Next, we profile the current teacher workforce, highlighting trends in its size and the distribution of underprepared teachers. We then discuss the factors that drive the demand for teachers and what changes to expect in these areas in future years. Finally, we review changes in the state's recruiting policies and discuss whether the current level of effort will be sufficient to meet California's demand for teachers in the future.

Defining an Underprepared Teacher

When local educators are not able to find an individual who has met the state's minimum requirements for becoming a teacher—the completion of a teacher preparation program and attainment of a state credential—they may hire someone who falls into one of four categories:

- Pre-interns, who have not yet demonstrated subject matter competency and who are participating in a program to help them acquire such competency.
- Emergency-permit holders, who may or may not have demonstrated subject matter competency and may or may not be enrolled in teacher preparation classes.
- Interns, who have demonstrated subject matter competency and are enrolled in an intern teacher preparation program.
- Teachers with waivers, for whom one or more requirements for certification have temporarily been waived and who may or may not have demonstrated subject matter competency or be enrolled in teacher preparation classes.

In this report, we use the term "underprepared teachers" to refer to all teachers who fall into one of these four categories. In doing so, we are using the word literally

to describe these teachers' status relative to the state's minimum requirements. We recognize that a "prepared teacher," one who has met the state's requirements, is not necessarily an immediately effective teacher; the state recognizes this fact, as well, and so calls on all new teachers to participate in a 2-year induction program before receiving a full credential. We should note, however, that underprepared teachers in California also tend to have less education and to be less experienced than their fully prepared peers (Esch & Shields, 2002).

We are also aware of a national debate about the importance of a credential in ensuring teacher quality. This debate has arisen in part because of the uneven research findings on the relationship between teacher characteristics and student achievement. One study of secondary mathematics teachers here in California found that, "after controlling for poverty, teacher experience and preparation significantly predict [student] test scores" (Fetler, 1999). Similarly, in one extensive review of the literature on the relationship between credential status and student achievement, it is concluded that "mathematics students learn more when their teachers have standard mathematics certification (as compared to private school mathematics certification or no mathematics certification)" (Wayne & Youngs, 2003). However, the same review finds no such relationship in the area of English. Similar contradictory findings appear for a variety of other teacher characteristics, such as course-taking patterns, where some studies find clear relationships between the kinds of courses prospective teachers take and the subsequent achievement of their students, and other studies do not (Wilson, Floden, & Ferrini-Mundy, 2001). Studies have, however, consistently found a relationship between teacher experience and student achievement—that is, novice teachers are less effective than their more experienced peers (see Rice, 2003, for a review).

Within this context, the federal No Child Left Behind legislation defines as "highly qualified" all teachers who have demonstrated subject matter competency and who have obtained a credential *or* are enrolled in an alternative preparation program leading to a credential. In response, California chose to include interns (not pre-interns, emergency-permit holders, or teachers on waivers) among the "highly qualified." This decision creates an apparent contradiction in state policy since, under state law, teachers are still supposed to obtain a credential before teaching; yet interns, who have no such credential, are considered "qualified." In large part, this definition was established so that California could comply with NCLB's requirements. Yet it also reflects a debate within the state about the significance of formal teacher preparation and credentialing and the adequacy of alternative routes.

In light of this debate, we include a discussion in this chapter of the composition of the underprepared teacher workforce, noting what number or percentage of the group is made up of each relevant subgroup: interns, emergency-permit holders, pre-interns, and waiver recipients.

Taking Stock of Trends in the Teacher Workforce

In response to the growing number of underprepared teachers in the late 1990s,

particularly in schools serving high proportions of poor, minority, and low-achieving students, California policy-makers acted aggressively. In the span of just a few years, new funds were allotted for teacher preparation and recruitment to increase the supply of teachers to meet the state's need. More money was also invested in induction efforts to retain those teachers who had already entered the profession. In addition, extra funds were set aside for "hard-to-staff" schools–those with 20% or more underprepared teachers–to assist them in attracting and retaining fully credentialed teachers. These investments led to an increase in the number of teacher credentials issued and greater activity in teacher recruitment and induction throughout the state.

Today, California is in a different position than it was in the late 1990s. The state is now struggling with a weak economy. Many of the teacher recruitment programs that were begun a few years ago have seen their budgets cut entirely. The university systems that are responsible for preparing most of the state's new teachers are also facing budget reductions.

The labor market has also changed. Unemployment is up, and many of the once desirable jobs in the private sector are gone. On one hand, this change could be good for the teaching profession, since more people might enter or return to what they see as a more stable profession. On the other hand, the state's severe budget crisis is threatening school budgets, and job security for teachers is less certain now, potentially detracting from the appeal of the profession.

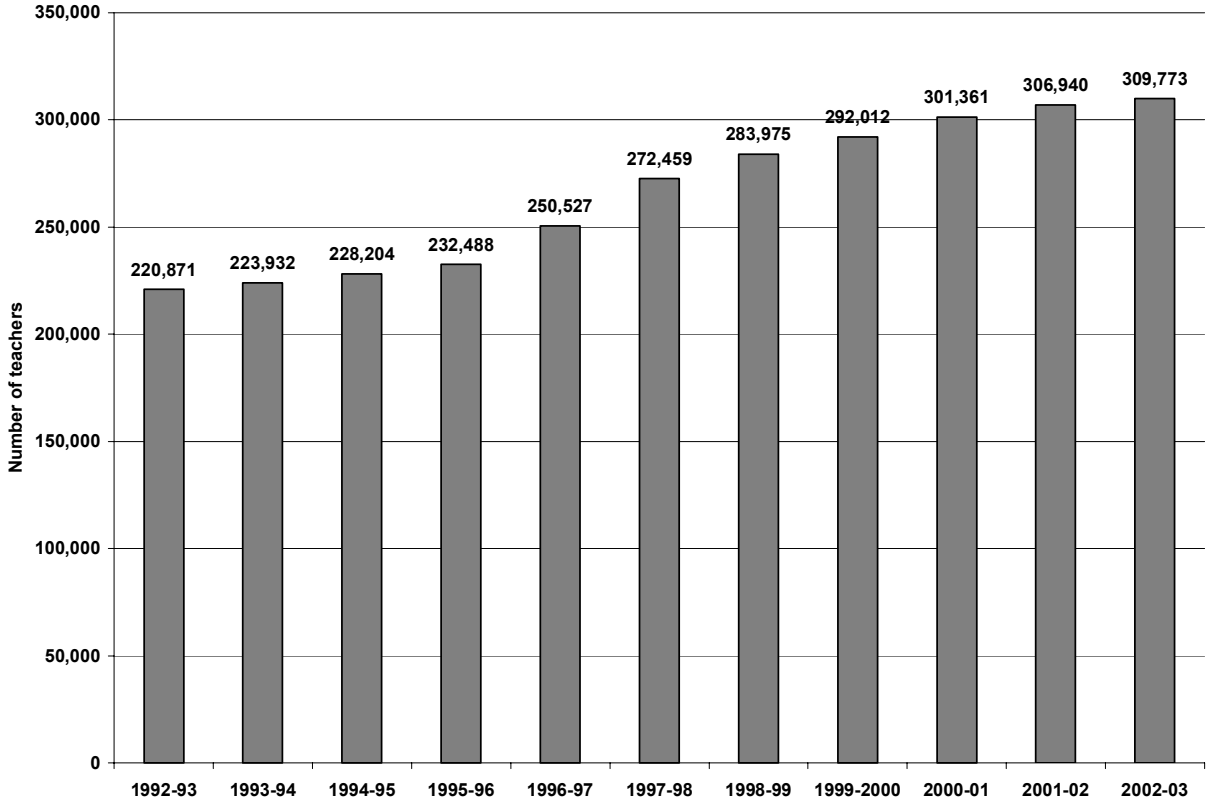
Given these rapid changes, it is difficult to determine whether California is still facing the same challenges. Is there still a shortage? A distribution problem? What is the future outlook for the teacher workforce? In the next section, we begin this discussion by looking at the most recent statewide data on California's teacher workforce.

Size of the Teacher Workforce

The mid-1990s saw significant growth in the size of the teacher workforce. Between 1995-96 and 1998-99, the workforce grew by more than 50,000 teachers, an average increase of about 16,500 teachers per year, or about 7% annually (see Figure 2-1). This change was primarily the result of increased demand generated by the state's class size reduction (CSR) program in grades K-3. This growth slowed considerably in the early 2000s as CSR reached full implementation and the state economy slowed. In 2003, only about 2,800 teachers were added to the workforce from the previous year, reaching a statewide total of 309,773 teachers. This represents about 1% growth, closer to the annual growth rates seen in the early 1990s, before CSR.

The recent slower growth of the overall workforce is reflected in the declining numbers of first-year teachers. There were almost 26,000 first-year teachers in 2000-01, compared with about 16,000 in 2002-03, the last year for which data are available (see next section for more discussion of first-year teachers). It should be noted, however, that this number is not equal to the number of teachers hired in a given year because it does not include experienced teachers who were rehired into the workforce after a period of absence.

Figure 2-1
California K-12 Teacher Workforce, 1992-93 to 2002-03



Sources: CDE (1993, 1994, 1995, 1996, 1997, 1998a, 1999a, 2000a, 2001a, 2002a, 2003a); SRI analysis.

Note: See Appendix B for additional information.

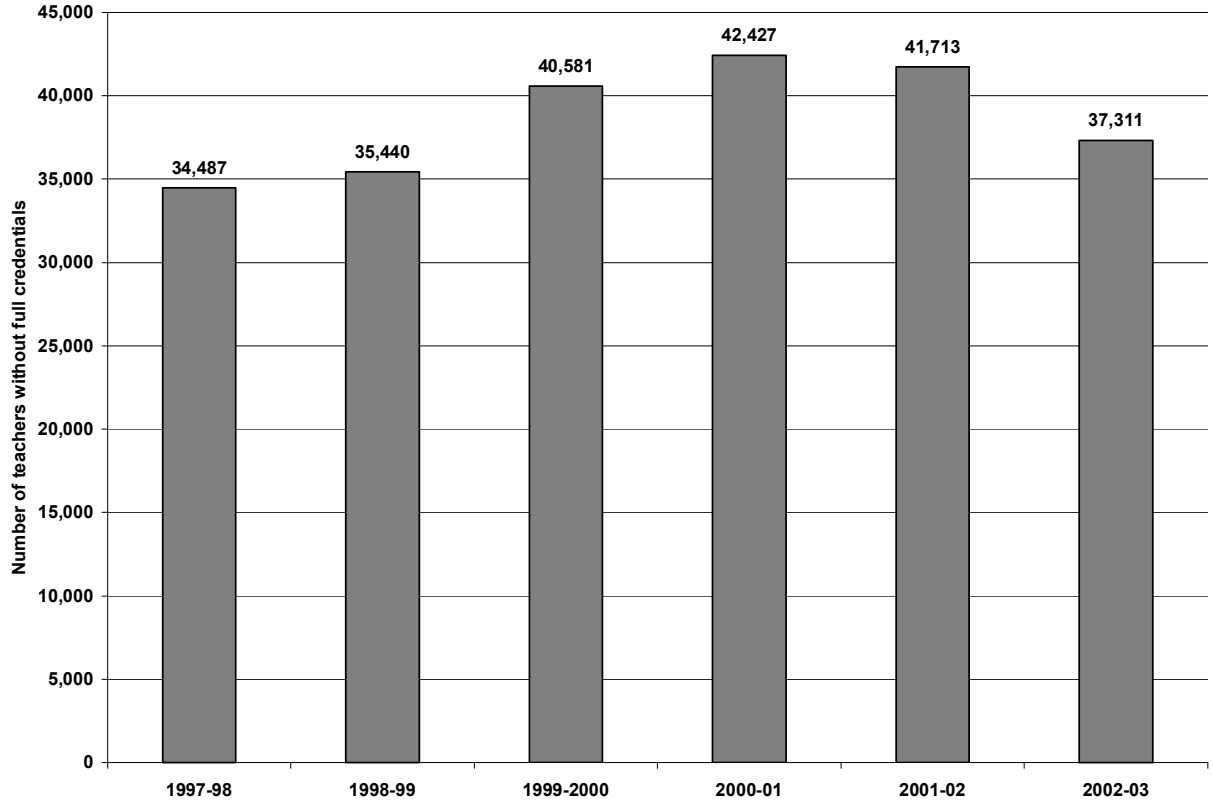
Decline in the Number of Underprepared Teachers

The number of working teachers who had not completed a credential grew as the 1990s drew to a close, eventually reaching a high of 42,427 in 2000-01, or 14% of the teacher workforce. In the following 2 years, however, this number declined. In 2002-03, the last year for which statewide data are available, there were 37,311 underprepared teachers, or 12% of the teacher workforce (see Figure 2-2).

An examination of a few large districts indicates that the number of underprepared teachers may have declined much more in the 2003-04 school year. In the Los Angeles Unified School District (LAUSD), the state's largest school district, the number of underprepared teachers has dropped substantially in the past 2 years, from a high of 10,000 in 2001-02 to about 8,000 in 2002-03 and about 6,000 in 2003-04 (Figure 2-3). On a smaller scale, similar trends can also be found in other large districts. In Long Beach, 400 fewer underprepared teachers were employed in the 2003-04 school year than in

the previous year, reducing the total proportion of underprepared teachers in the district from 21% to 12%. In Santa Ana, about 240 fewer underprepared teachers were employed in 2003-04, bringing the proportion down from 14% to 6%. And in Fresno, 150 fewer underprepared teachers were employed in 2003-04, bringing the proportion down from 7% to 3%. (SRI phone survey, 2003)

Figure 2-2
Number of Underprepared Teachers in California, 1997-98 to 2002-03

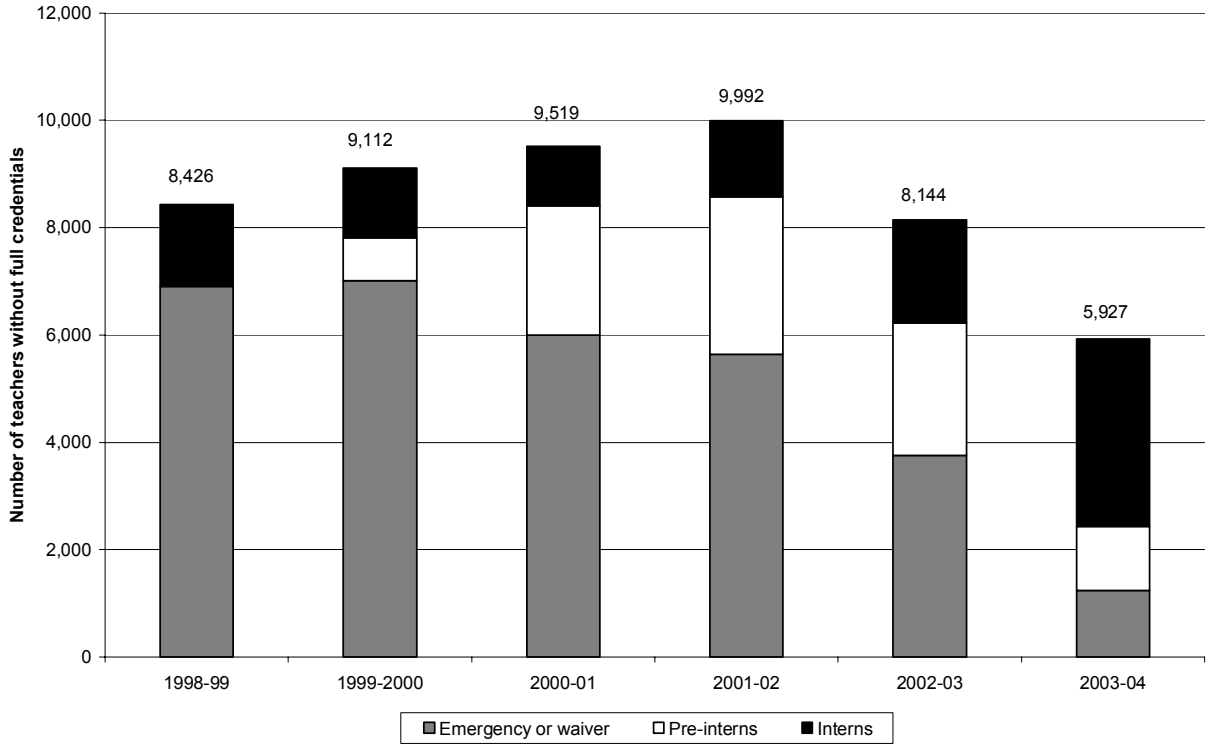


Sources: CDE (1998a, 1999a, 2000a, 2001a, 2002a, 2003a); SRI analysis.

Note: See Appendix B for additional information.

Figure 2-3

Number of Underprepared Teachers in LAUSD, 1998-99 to 2003-04

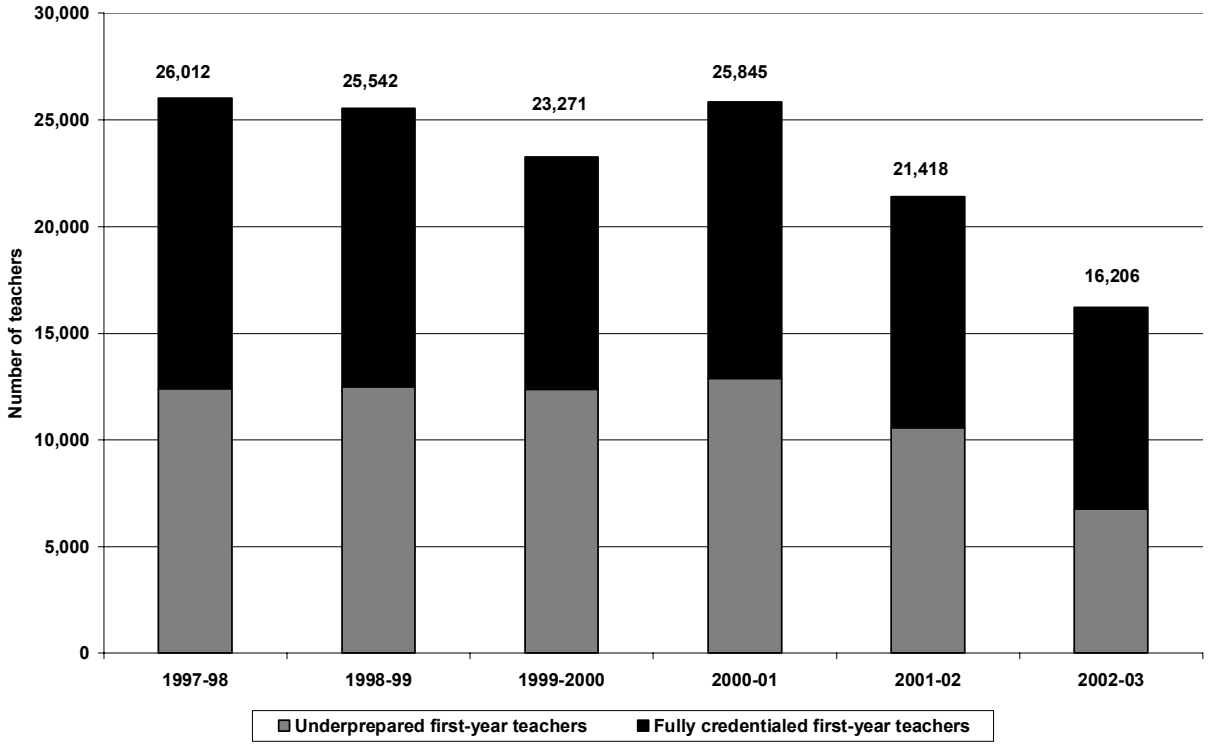


Source: SRI phone survey, 2003.

A number of factors may be responsible for the recent decline in the number of underprepared teachers. First, teacher hiring is down overall. As a result, the *number* of underprepared teachers hired has declined, as well as the *percentage* of new hires who are underprepared, presumably because districts have greater choice among candidates. As mentioned above, the total number of first-year teachers decreased to about 16,000 in 2002-03, down from about 26,000 just 2 years earlier. The proportion of first-year teachers who were underprepared decreased from 50% to 42% in that same period (see Figure 2-4).

The numbers of underprepared teachers may also be declining because of increased state efforts to repair and strengthen the teacher preparation "pipeline." In the late 1990s, state policy-makers responded to the teacher shortage by stepping up efforts to prepare teachers, and credential production increased as a result. In addition, funding was increased for programs aimed at attracting more fully credentialed teachers and retaining them in the profession. These efforts led to an increase in teacher recruitment and induction activity across the state and may have played a part in decreasing the number of underprepared teachers in the state as a whole.

Figure 2-4
Number of First-Year Teachers, by Credential Status, 1997-98 to 2002-03



Sources: CDE (1998b, 1999b, 2000b, 2001b, 2002b, 2003b); SRI analysis.

Note: See Appendix B for additional information.

The economy may also be a key factor in the decrease in the numbers of underprepared teachers. As job opportunities in the private sector shrank, the teacher workforce may have benefited if displaced workers became teachers or entered teacher preparation programs. Additionally, the poor economy may have kept more teachers *in* the profession, reducing the annual number of new hires.

In 2002-03, NCLB may also have affected the number of underprepared teachers. A number of CSU campuses report enrolling increased numbers of emergency-permitted teachers seeking to finish their requirements for the preliminary credential.

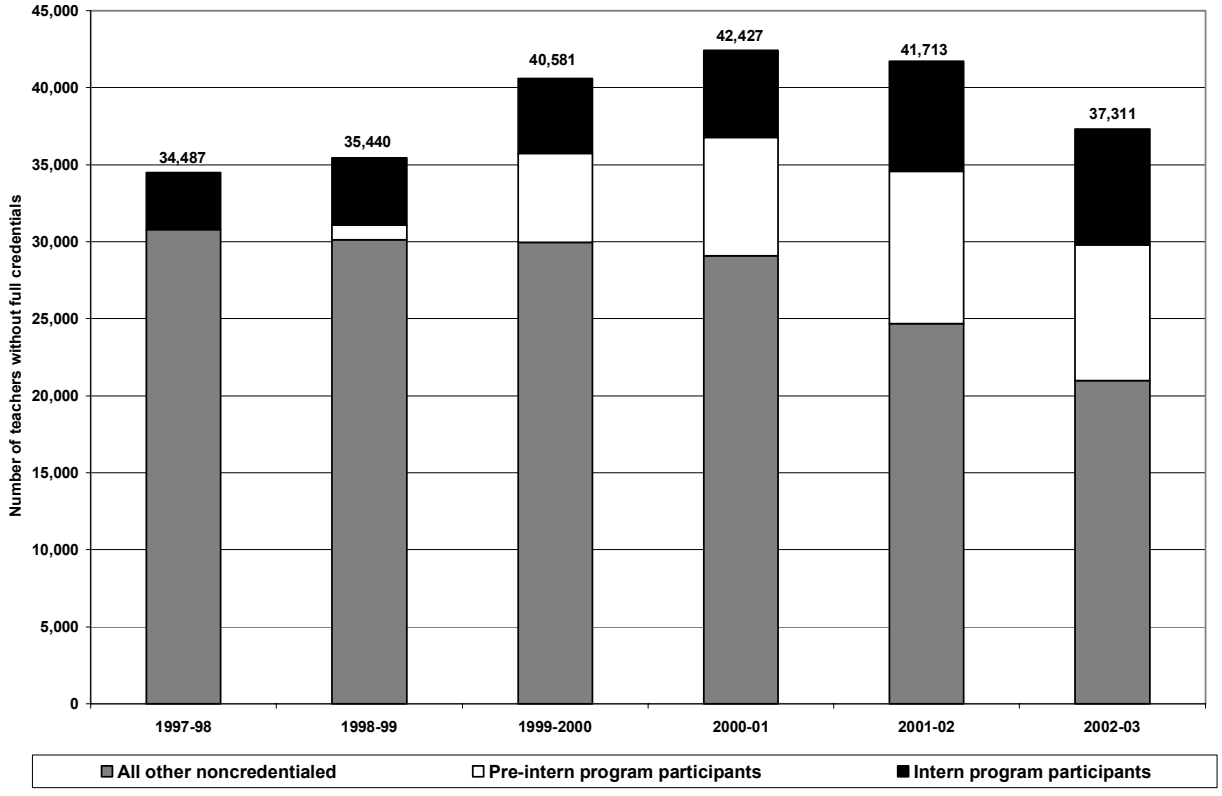
Change in the Composition of the Underprepared-Teacher Pool

In addition to an overall decline in the number of underprepared teachers, the composition of the underprepared-teacher pool has changed as more individuals enter intern and pre-intern programs. Intern programs are teacher preparation programs for individuals who are already teaching. Participation in these programs has increased steadily over the past several years. In 1997-98, 3,706 individuals were participating in university- or district-run intern programs, or 11% of all underprepared teachers (see Figure 2-5). Five years later, in 2002-03, there were 7,505 interns, or 20% of all underprepared teachers. Now the intern program has become a major component of

California's response to the requirements of NCLB, and intern numbers are expected to grow still more in the 2003-04 school year. In LAUSD, for example, intern numbers have recently swelled to nearly 3,500, a substantial increase from about 1,400 just 2 years earlier.

First introduced in 1998-99, pre-intern programs are designed to assist teachers in advancing toward teacher credentialing. From 955 pre-interns in 1998-99, or 3% of all underprepared teachers, the program grew to a high of 9,871 participants in 2001-02, or 24% of all underprepared teachers. In 2002-03, the last year for which statewide data are available, the number of pre-interns declined slightly to 8,843, again about 24% of all underprepared teachers. Because NCLB does not consider pre-interns to be highly qualified, districts will have little incentive to hire these individuals as teachers of record from this point forward. As a result, the pre-intern program is likely to decrease in size and change its focus to helping prospective teachers prepare to pass subject matter competency exams and enter intern programs. We discuss this issue further in Chapter 3.

Figure 2-5
Number of Underprepared Teachers, by Participation in Intern and Pre-Intern Programs, 1997-1998 to 2002-03

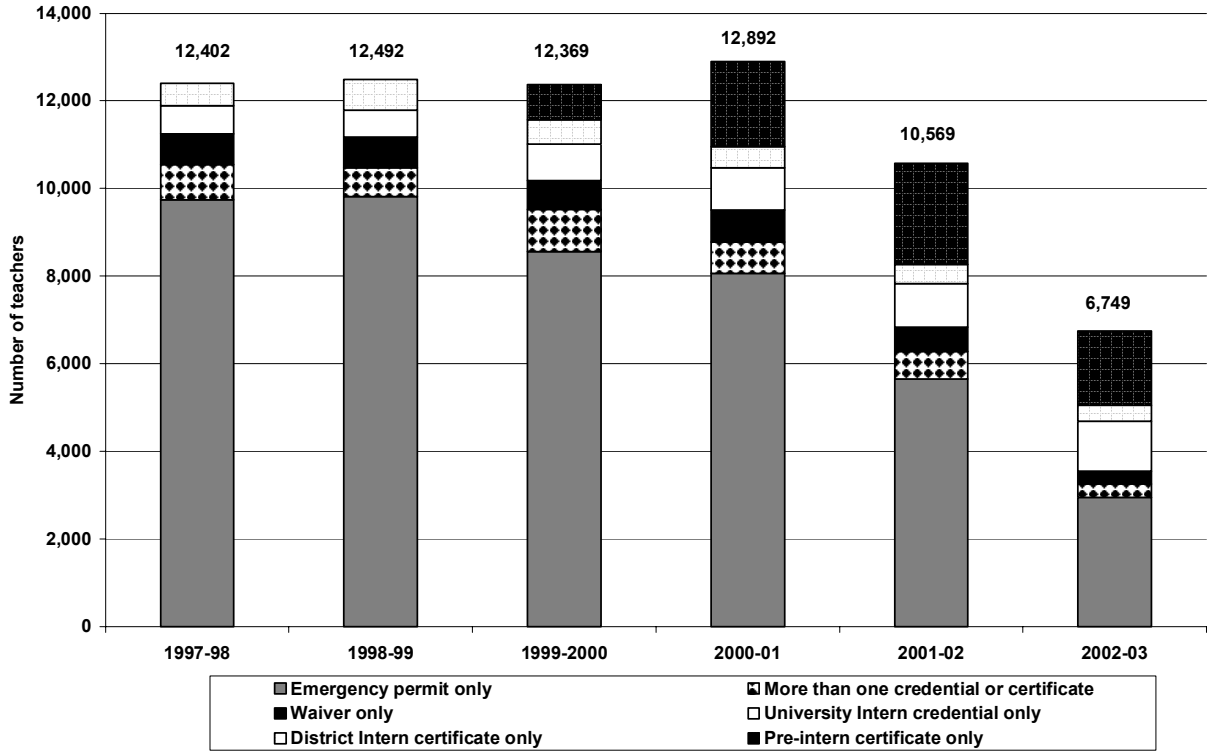


Sources: CDE (1998a, 1999a, 2000a, 2001a, 2002a, 2003a), CTC (2000a, 2000b, 2000c, 2001a, 2003a, 2003b); SRI analysis.

Note: See Appendix B for additional information.

A look at just first-year teachers shows dramatic changes in the credential status of new underprepared teachers hired by districts in recent years. In 1997-98, 79% of new underprepared teachers were emergency-permit holders. By 2002-03, that proportion had decreased to just 44% (Figure 2-6). Given the changes described above, this number may drop even more dramatically in 2003-04. Again, LAUSD provides a striking example. Among new hires in LAUSD this year (2003-04), there are only 32 emergency-permit holders, down from 1,250 just 2 years earlier. These changes reflect an overall decrease in hiring, as well as an aggressive district policy to reduce the number of emergency–permit holders in classrooms in response to NCLB.

Figure 2-6
Number of Underprepared First-Year Teachers, by Credential Type, 1997-98 to 2002-03



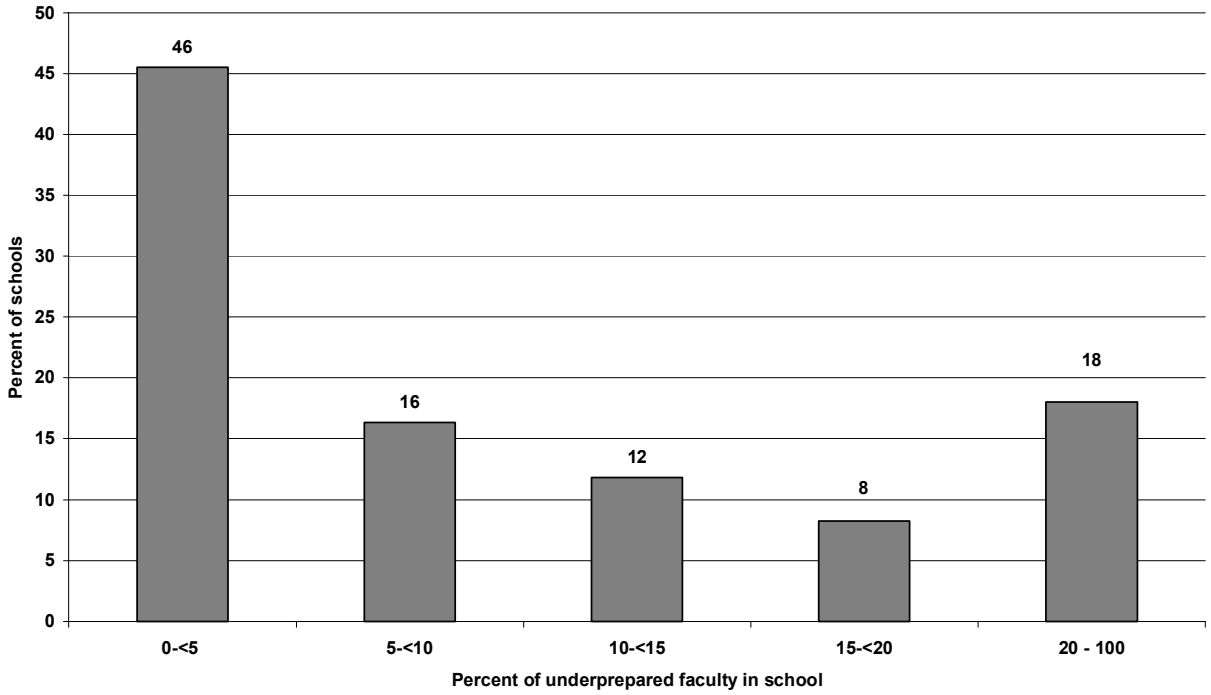
Sources: CDE (1998b, 1999b, 2000b, 2001b, 2002b, 2003b); SRI analysis.

Distribution of Underprepared Teachers across the State

The teacher shortage has affected California schools differentially. For several years, we have tracked how some schools struggle to find and hire fully credentialed teacher candidates. At the same time, we have shown that some schools have never been affected by the teacher shortage, even when it was most severe. In 2002-03, the last year for which state data are available, the inequitable distribution of underprepared teachers remained. Eighteen percent of California schools had 20% or more underprepared teachers (see Figure 2-7) and were likely to face serious problems as a result. For example, these schools probably had to spend disproportionate

amounts of time and human resources to recruit, hire, and induct new teachers every year. They also bear the burden of training teachers on the job, usually without adequate resources to do so. Providing professional development is also a challenge in schools where more than a fifth of teachers lack even basic training. These and other issues take time and energy away from the already difficult task of focusing on high-quality instruction and student learning. It is important to note that high concentrations of underprepared teachers are not the problem of just a few large districts. In 2002-03, 12% of districts had an average of 20% or more underprepared teachers in their schools (see Figure C-1 in Appendix C for full distribution of districts).

Figure 2-7
Distribution of Schools, by School-Level Percentage of Underprepared Faculty, 2002-03



Sources: CDE (2003c, 2003d); SRI analysis.

Note: See Appendix B for additional information.

Fortunately, the number of schools with such high concentrations of underprepared teachers has declined and is likely to decline even more. In 2000-01, more than 1,800 California schools had 20% or more underprepared teachers; in 2002-03, that number had decreased to about 1,400. Given early indications, we expect that this number will decline still more in the 2003-04 school year. At the same time, the number of schools that have fewer than 5% underprepared teachers on staff is rising. After hovering around 1,000 schools in 1999-2000 to 2001-02, this number rose to about 1,240 schools (46%) in 2002-03. Again, we expect that this number will continue to rise as the teacher labor market softens.

Although the trends are promising, the historical maldistribution points to an important problem. The severity of the teacher shortage in future years is not known, but it is sure to be inequitably distributed across California's schools. Teacher qualifications may be improving for the whole state, but it is certain that, without intervention, some schools will continue to have problems finding and keeping fully credentialed teachers. Left to fend for themselves in a free market for teachers, these schools simply cannot compete for the most qualified teachers. In the worst cases, schools end up hiring many teachers with little experience and few qualifications, putting their students at a serious disadvantage year after year. Next, we describe the types of schools and students that historically have shouldered this burden and are likely to continue to do so in the foreseeable future.

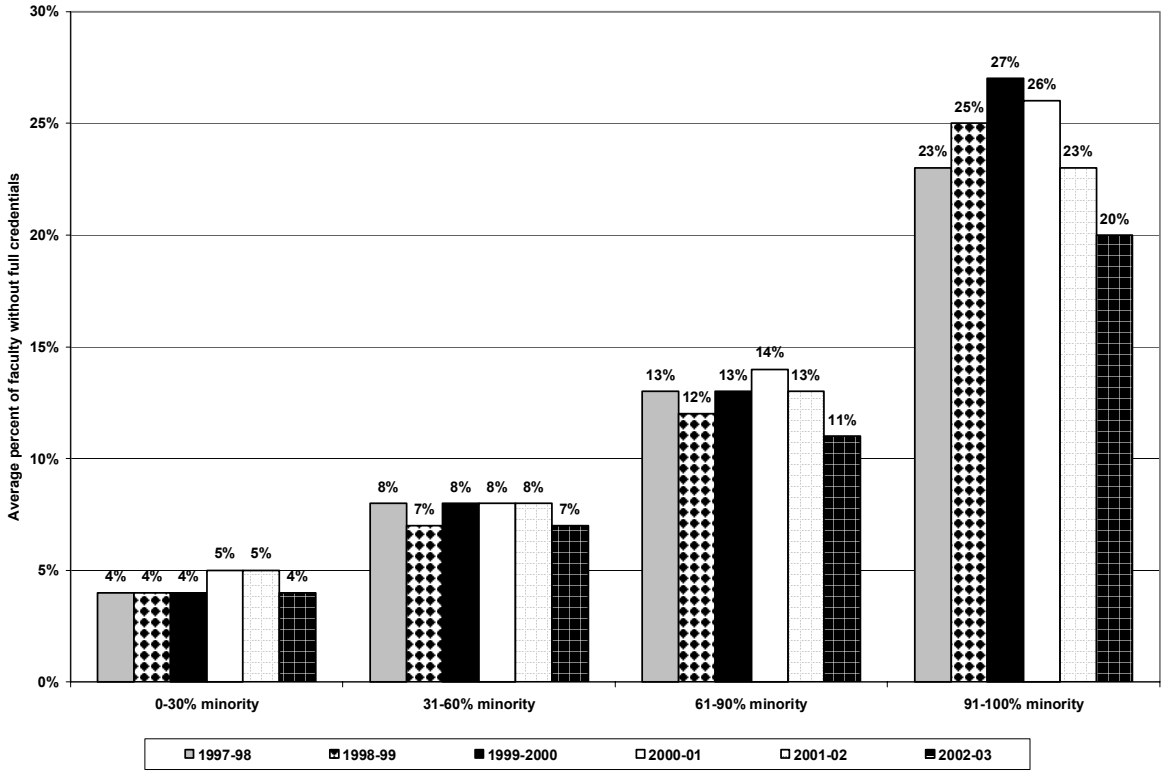
Distribution of Underprepared Teachers across Schools with Different Characteristics

As in past years, underprepared teachers are still found in disproportionate numbers in urban schools, low-performing schools, and schools serving high numbers of poor and minority students or English language learners. The situation is improving, but the most recent data still show a troubling discrepancy.

Overall, urban districts are more likely to have high concentrations of underprepared teachers, although this disparity has been improving somewhat over the past few years. In 2002-03, urban schools had an average of 12% underprepared teachers on staff, compared with 10% in suburban schools and 7% in rural schools (see Figure C-2 in Appendix C for the distribution of underprepared teachers by urbanicity over time).

A similar trend can be found in the data for schools with high percentages of minority students. Over time, schools serving high proportions of minority students (more than 90%) have seen a decrease in the percentage of underprepared teachers. However, the most recent numbers still show a substantial maldistribution: in 2002-03, high-minority schools had an average of 20% underprepared teachers on staff, while low-minority schools had an average of only 4% (Figure 2-8). Although the differences are not as dramatic, we also see the same trend among schools of different poverty levels (see Figure C-3 in Appendix C for the distribution of underprepared teachers over time by school poverty level).

Figure 2-8
Distribution of Underprepared Teachers, by School-Level Percentage of Minority Students, 1997-98 to 2002-03

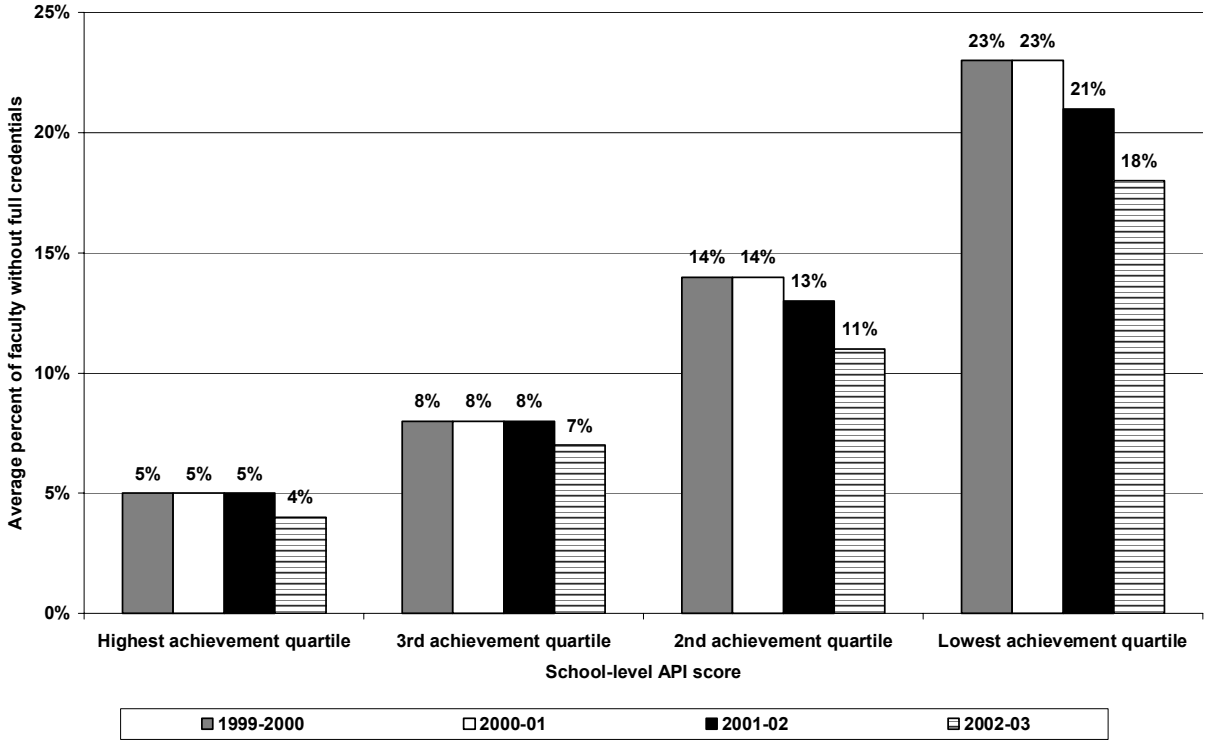


Sources: CDE (1998c, 1998d, 1998e, 1999c, 1999d, 1999e, 2000c, 2000e, 2000f, 2001c, 2001e, 2001f, 2002c, 2002e, 2002f, 2003c, 2003d, 2003f); SRI analysis.

Note: See Appendix B for additional information.

Schools with the lowest scores on the state's Academic Performance Index also have the greatest average percentage of underprepared teachers. This has been the case for four school years (every year for which the API system has been in place). Over time, the situation has gotten slightly better: in 2002-03, the lowest-achieving schools had 18% underprepared teachers, on average, down from 23% in 1999-2000 (Figure 2-9). This trend is encouraging, but policy-makers must still take note of the implications of the historical pattern: those schools that are most in need of well-trained, effective teachers have chronically also had the greatest percentages of teachers who do not meet the state's minimum requirements for even a preliminary credential. In this era of high standards and high stakes for all students, this pattern hardly indicates a level playing field.

Figure 2-9
Distribution of Underprepared Teachers, by School-Level API Score, 1999-2000 to 2002-03

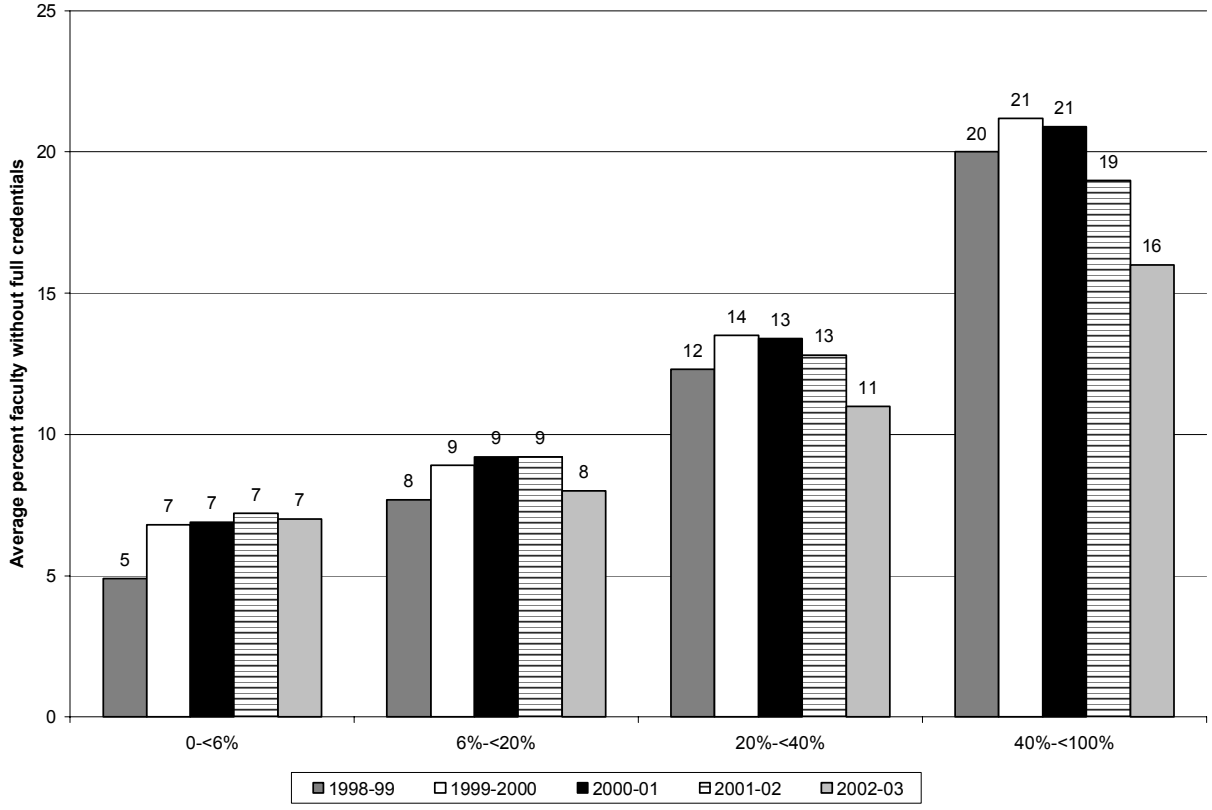


Sources: CDE (2000c, 2000d, 2001c, 2001d, 2002c, 2002d, 2003c, 2003d, 2003e); SRI analysis.

Note: See Appendix B for additional information.

Among schools with high percentages of English language learner (ELL) students, we again see an improving, but still troublesome maldistribution. English language learners are a significant and growing group of students: California schools served approximately 1.6 million English language learners in 2002-03, an increase of almost 18% from 1995-96 (see Figure C-4 in Appendix C for growth in ELL student enrollment over time). In those schools with student populations of 40% to 100% English language learners—roughly a quarter of all schools in the state—there were an average of 16% underprepared teachers in 2002-03 (Figure 2-10). This compares with only 7% underprepared teachers in schools serving fewer than 6% English language learners. This percentage of underprepared teachers is an improvement from school year 1999-2000, during which schools serving high proportions of English language learners had an average of 22% underprepared teachers. Although this inequitable distribution has improved in recent years, the issue continues to raise serious questions about the way that human resources are distributed in California schools. English language learners are one of the highest-need student populations, yet as a whole they continue to have the least prepared teachers to assist them.

Figure 2-10
Distribution of Underprepared Teachers, by School-Level Percentage of English Language Learners, 1998-99 to 2002-03



Sources: CDE (1999c, 1999g, 2000c, 2000h, 2001c, 2001h, 2002c, 2002h, 2003c, 2003d, 2003h); SRI analysis.

Overall, then, we see a persistent picture of the type of school that is most likely to have a high concentration of underprepared teachers and the problems associated with it. Those schools serving high percentages of low-performing, minority, or poor students or English language learners are most likely to be staffed by higher percentages of teachers without full credentials. And although the situation appears to be improving somewhat, the historical patterns are discouraging. In general, we see that as the number of underprepared teachers has fluctuated over the years, schools serving the most vulnerable student groups have been most affected. During the same period, schools serving their higher-achieving, more affluent peers have managed to maintain relatively constant and low numbers of underprepared teachers.

Distribution of Underprepared Teachers across Different Subject Areas

Besides being concentrated in certain types of schools, underprepared teachers have historically been concentrated in certain subject areas. Fully credentialed elementary teachers, in especially short supply during the years in which CSR was implemented, seem to be increasing gradually in number. In recent years, however, the state has seen increased shortages of math and science teachers (Table 2-1).

Table 2-1
Percentage of Underprepared Teachers, by Assignment, 1997-98 to 2002-03

Assignment	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
Elementary	11%	12%	13%	13%	12%	10%
All secondary	6%	7%	9%	10%	11%	10%
Math	5%	7%	11%	12%	14%	15%
Physical science	5%	8%	10%	11%	11%	13%
Life science	5%	6%	9%	10%	10%	12%
English	3%	4%	7%	8%	9%	8%
Social science	3%	3%	5%	5%	6%	6%
Special education	13%	10%	14%	17%	18%	18%

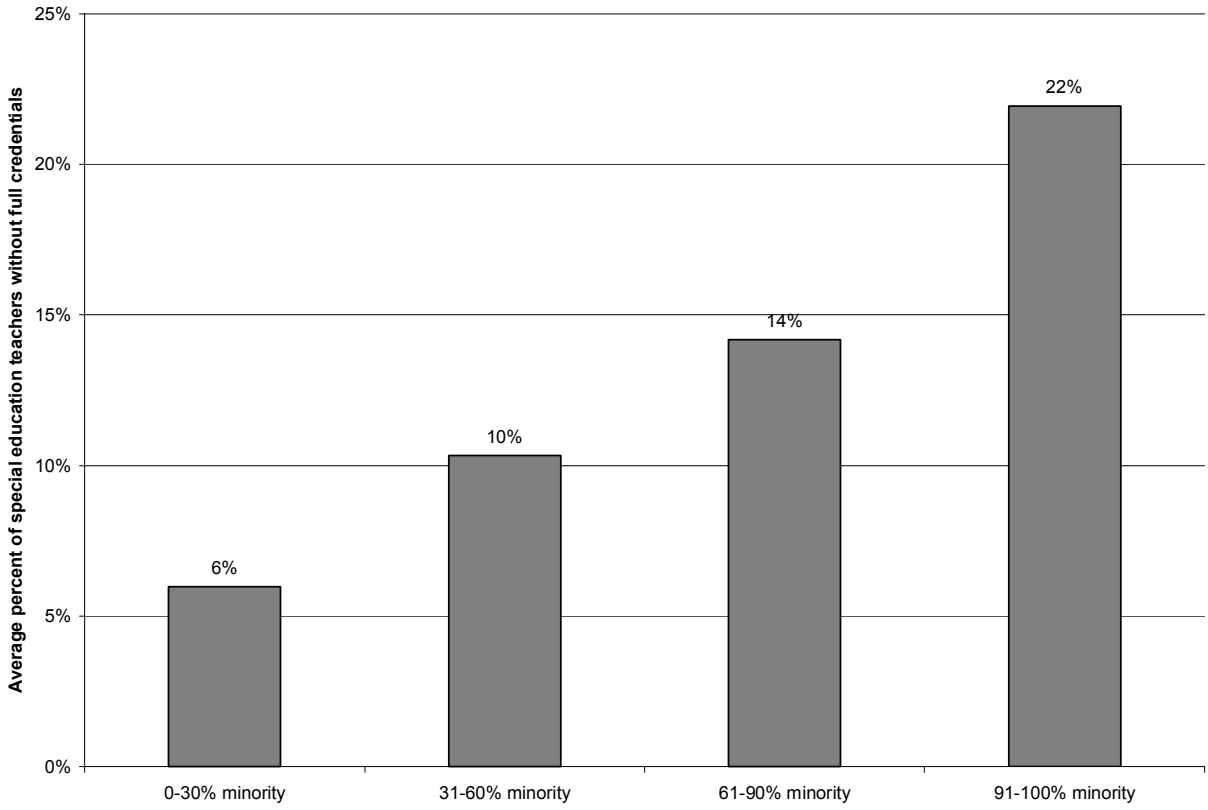
Sources: CDE (1998b, 1999b, 2000b, 2001b, 2002b, 2003b); SRI analysis.

Note: See Appendix B for additional information.

Fully credentialed special education teachers have for many years been in very short supply, and the situation shows no signs of improvement. Special education students are an important—and growing—segment of California's student population. In 2002-03, there were more than 675,000 special education students, up from 550,000 in 1994-95 (see Figure C-5 in Appendix C for growth in special education enrollment over time). In 2002-03, there were more than 36,000 full-time special education teachers in the state, 18% of whom did not hold full credentials. Although this percentage has been fairly stable over the past few years, the number of underprepared special education teachers has grown along with the student population, from 5,800 to 6,400 since 2000-01.

The problem appears to be aggravated in schools serving high proportions of minority students. In 2002-03, in schools serving 91% to 100% minority students, 22% of special education teachers were underprepared (Figure 2-11). This compares with just 6% of special education teachers in schools with small minority student populations. The pattern is similar when the data are disaggregated by the percentage of students in the school receiving free or reduced-price lunch or by the school API score. (See Figures C-6 and C-7 in Appendix C for distribution of underprepared special education teachers by school-level API score and percentage of students receiving free or reduced-price lunch.)

Figure 2-11
Distribution of Underprepared Special Education Teachers, by School-Level Percentage of Minority Students, 2002-03



Sources: CDE (2003b, 2003c, 2003d, 2003f); SRI analysis.

Again, it is important to note that special education students, like their general education peers, are expected to meet the state's rigorous content standards.

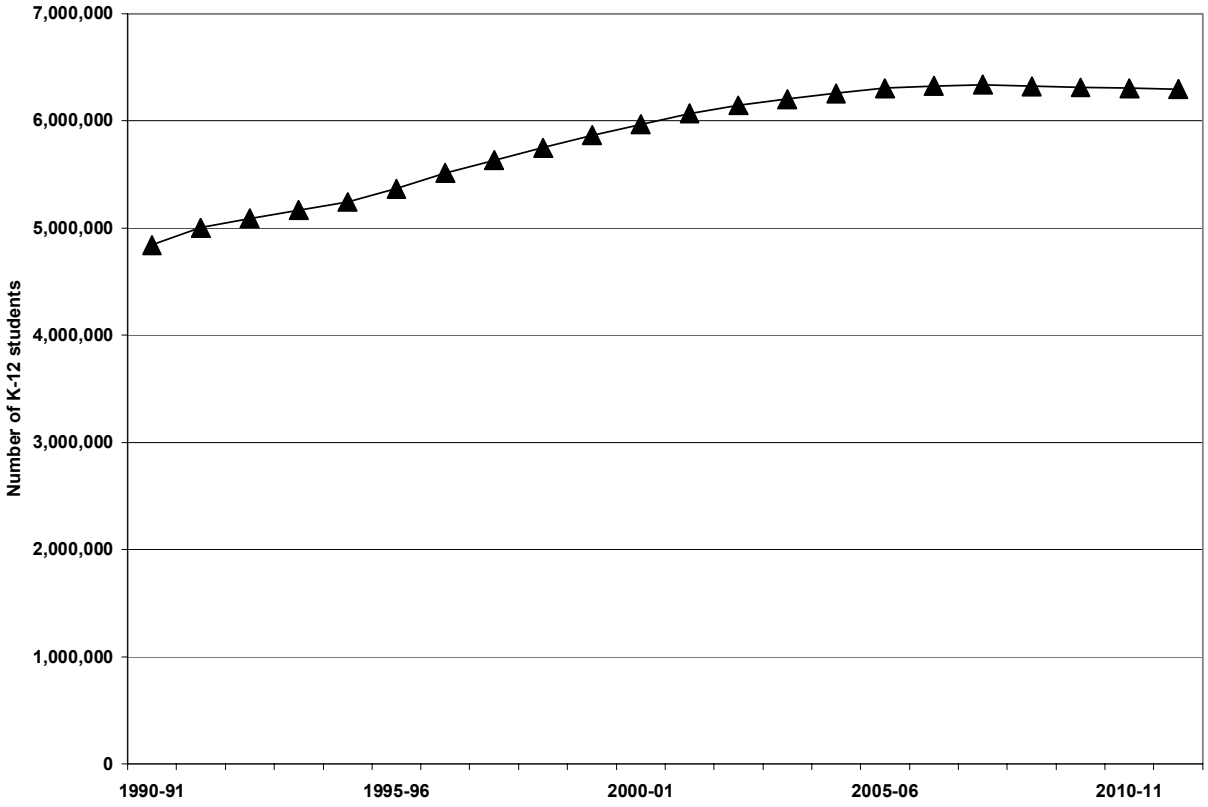
Looking Ahead: Future Demand for Teachers

We have shown that after a period of sharp growth and an increasing shortage of fully prepared teachers, workforce trends are shifting. The demand for first-year teachers is down, and the number and percentage of underprepared teachers are decreasing. We have noted that there are many forces, ranging from economic shifts to the introduction of new federal policies, that have influenced these trends in recent years. Looking ahead, these same factors should continue to have an impact. NCLB's requirement that all core teachers be highly qualified by 2005-06 means that hiring teachers on emergency permits is an increasingly untenable option for districts. This policy will continue to fuel the demand for fully credentialed teachers and is likely to contribute to a continued decrease in the percentage of underprepared teachers. The future of California's economy is less certain, but clearly changes in the state labor market and state revenues could have very significant impacts on teacher demand in

either direction. The uncertain impacts and complex interaction of these policy and economic factors make it difficult to project future trends with much accuracy. We can, however, examine with more certainty two key demographic trends that will have implications for the future demand for teachers: student enrollment and teacher retirement.

A key factor in driving the demand for teachers is simply the number of students in the state's schools. The sharp increase in the demand for teachers during the 1990s reflected a growth in student enrollment. In 2001-02, there were approximately 6,068,900 students in California schools, an increase of 25% from 11 years earlier (Figure 2-12). However, enrollment growth is expected to slow over the next few years, with enrollment peaking in 2007-08 at around 6,335,500 students. This slowing growth means that student enrollment will not be a factor in raising the demand for new teachers through the next decade as it has over the past decade.

Figure 2-12
Actual and Projected K-12 Public School Enrollment in California, 1990-91 to 2011-12



Source: California Department of Finance (2002).

Note: Data for 1990-91 to 2001-02 are actual numbers; data for 2002-03 to 2011-12 are projections

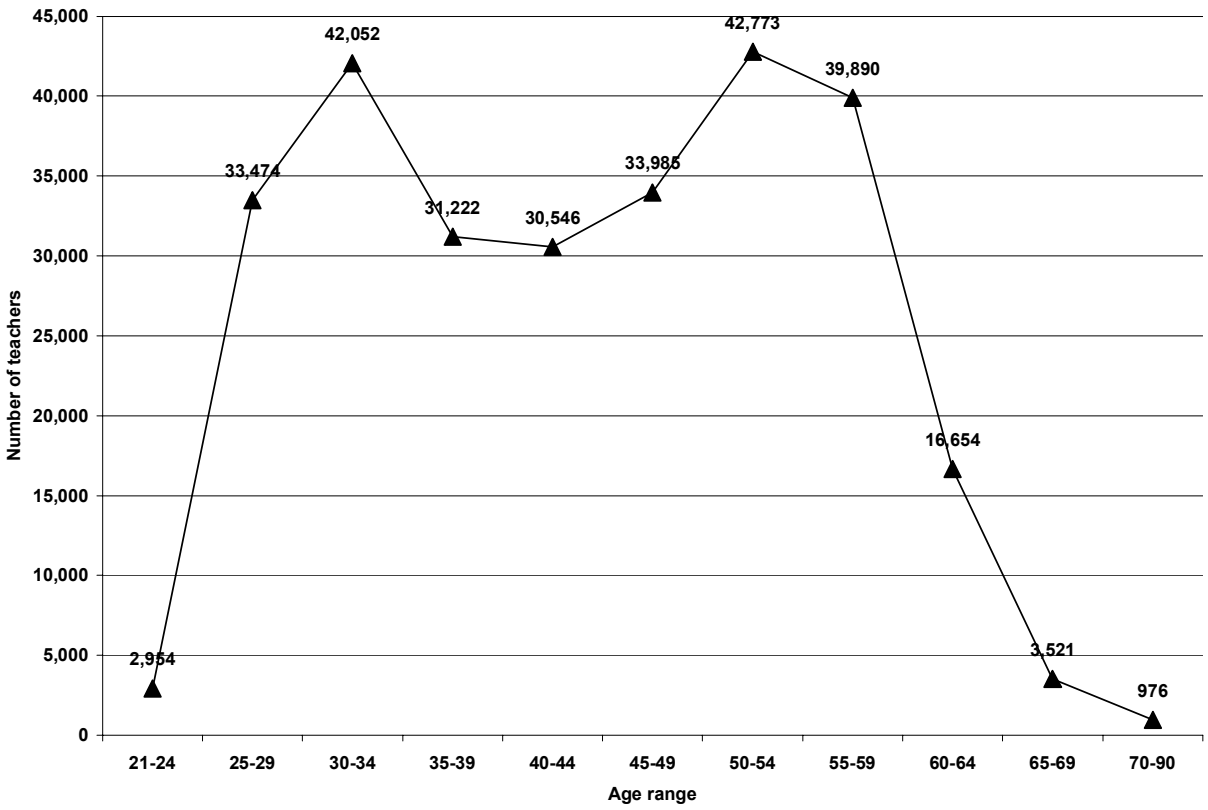
Although overall student enrollment will flatten, the pattern will not be consistent throughout the state, and in certain areas and grade levels, student enrollment is even expected to grow. At the elementary level, enrollment growth is projected to decline about 1% over about the next decade (California Department of Finance, 2002). At the secondary level, however, enrollment will grow until 2009, increasing by about 17% from 2001. This change will generate a greater demand for single-subject teachers, particularly in those subject areas that are already struggling to find fully credentialed teachers (e.g., math and science).

In some areas, particularly smaller rural counties, enrollment is projected to decline. In four counties–Del Norte, Sierra, Siskiyou, and Trinity–enrollment is expected to decrease by at least 20% over the next decade. During the same period, Orange, Riverside, and San Bernardino counties combined will increase by close to 160,000 students, or about 13%. Los Angeles, the county with the greatest student enrollment, will see a slight decline over the next decade or so. These differences point to the need for a regional approach to staffing schools. Although student enrollment will generate less demand for teachers in the state as a whole, some areas will need to plan for significant increases in demand.

The second demographic factor that influences the demand for teachers is the rate at which teachers leave the workforce, either at retirement age or before. For several years, the average retirement age for teachers has remained consistently around 60 or 61 years. Statewide workforce data show that a large number of teachers–about 21,000–are 60 years or older, at or very near the average retirement age (Figure 2-13). Another 40,000 are between the ages of 55 and 59. More than 100,000 teachers–37% of California's teacher workforce–are 50 or older and likely to retire in the next decade or so, creating open positions that need to be filled.[1]

[1] Of course, many teachers also leave the profession before retirement age. In California, there is no data system that can track individual teachers over time, making teacher attrition a notoriously difficult number to calculate.

Figure 2-13
Age Distribution of Teacher Workforce in California, 2002-03



Source: CDE (2003i); SRI analysis.

These demographic trends, then, suggest a mixed story. Relatively stable student enrollment, on its own, would maintain a relatively level demand for teachers. In contrast, the pending retirement boom is likely to increase the demand for teachers, perhaps substantially—creating 100,000 job vacancies in the next 10 years.

The Policy Dilemma: How to Respond to Trends in the Teacher Workforce

In response to the shortage of fully prepared teachers across the state, policy-makers put in place a number of initiatives to grow and strengthen the teacher workforce. Now that the number of underprepared teachers is declining, and in the face of significant budget cuts, how will policy-makers respond?

Perhaps the clearest indication of policy-makers' response is in the area of teacher recruitment. Seeking to address the teacher shortage of the late 1990s, the state launched an aggressive campaign of recruitment initiatives. The passage in 1997-98 of SB 824 (CalTeach) marked the beginning of the state's commitment to recruitment and led to the addition of three more programs and the augmentation of two others in 1999-

2000. At the peak of allocations in fiscal year 2000-01, policy-makers slated $151.6 million for these programs.

These state funds went to a variety of programs, each targeting different aspects of the recruitment and hiring process. Some funds targeted expanding and enhancing statewide and local teacher recruitment efforts. For example, the Teaching as a Priority Block Grant Program (TAP) provided block grants to districts with API rankings of 1 to 5 to implement recruitment strategies for hiring more credentialed teachers. The Teacher Recruitment Incentive Program (TRIP) opened six regional teacher recruitment centers whose services were available to all districts. The California Center for Teaching Careers (CalTeach) provided outreach and advertising at a statewide level. Other state funds went to easing the financial burden of teacher preparation: the Cal Grant T and the Governor's Teaching Fellowship provided financial assistance to students in teacher preparation programs, while the Assumption Program of Loans for Education (APLE) assumed student loans for teachers in shortage areas at designated schools.

In the past year, nearly all state-funded recruitment programs have had their funding cut (see Table 2-2) and have been forced to eliminate or significantly reduce their activities. For example, leftover TRIP funds will still be spent until the end of the 2003-04 fiscal year, but with no new allocation, all six of the regional recruitment centers will eventually disappear. The budget allocation for CalTeach has also been eliminated, although prospective teachers can still use the CalTeach Web site and Ed-Join to apply for jobs.

APLE is the only recruitment program that has not been touched by the state's financial problems. From 2001 to 2003, 13,000 awards were allotted, and the state authorized another 7,700 loans in the 2003-04 budget. The Governor's Teaching Fellowship has been folded into the APLE program, and APLE may also assume some of the burden from the now-defunct Cal Grant T program.

Table 2-2
State-Sponsored Recruitment Program Funding, 1998-99 to 2003-04

		Budget allocation (in millions)					
Program	Description	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04
California Center for Teaching Careers	Career center, outreach and advertising	$2.0	$2.0	$11.0	$11.0	$2.0	$0.0
Cal Grant T	Provides tuition and fee assistance to students in teacher preparation programs	$10.0	$10.0	$10.0	$10.0	$6.0	$0.0
Teacher Recruitment Incentive Program	Six regional teacher recruitment centers	-	-	$9.4	$9.4	$9.4	$0.0
Teaching as a Priority Block Grant Program	Block grants to districts for recruitment activities	-	-	$118.7	$0.0	$88.7	$0.0
Governor's Teaching Fellowship	Provides tuition and fee assistance to students in teacher preparation programs	-	-	$3.5	$21.1	$0.0	$0.0
Assumption Program of Loans for Education	Assumes student loans of teachers who agree to teach in shortage subjects or designated schools	$2.1*	$2.1*	$5.0*	$11.7	20.5**	$30.0

Sources: CFTL (2002) CalTeach (2003); California Student Aid Commission (2003); Legislative Analyst's Office (2003); CDE (2003r).

** Represents expenditures, not budget allocation.*

***Originally funded at $22.3 million, then reduced to $20.5 million in the midyear revision.*

Given the scant reporting requirements of some of these programs, it is difficult even to ascertain exactly how much of the money was spent. It is clear, however, that these programs did generate recruitment activity during their time. In 2002-03, the block-granted TAP funds reached nearly 60% of the eligible districts and charter schools (349 districts and 15 charter schools in total). Through our case studies, we found that districts used TAP funds in a variety of ways, including signing bonuses to secure early commitments from teachers, recruitment visits to lure distant candidates, reimbursement of moving expenses, and, at one school site, support for veteran

credentialed teachers attending relevant conferences. TAP has also been employed to recruit teachers with specific credentials, such as CLAD and special education, to work in hard-to-staff schools.

One large urban district used funds to increase the capacity of its human resources department, facilitating more efficient processing of applicants and reducing the number of frustrated job seekers. In some smaller districts, TAP money was used to expand the role of central district officials in recruitment efforts, funding travel to locate and interview candidates and creating local pipelines through the development of relationships with teacher education programs. These changes have eliminated duplication of efforts by multiple schools in the same district, freeing up time that principals and other site administrators must ordinarily dedicate to recruiting new staff.

Our case studies revealed that districts also took advantage of TRIP's regional recruitment centers in different ways. Although TRIP's services were available to all districts, it appears that hard-to-staff districts sought their assistance more often for help with substantial challenges, while more desirable districts tended to use the centers only to fill particular positions. One large urban district used the recruitment centers to find enough applicants for its openings, while another smaller, hard-to-staff district employed the resources to gain more visibility. The recruitment centers have also assisted some districts by centralizing several key recruitment needs for districts strapped for time, funds, and personnel.

Cost-intensive efforts, such as media advertising, Web site development, and job fairs, were also assumed by the recruitment centers. One rural superintendent noted that in addition to producing job fairs, his regional recruitment center had also sent him a large number of teacher referrals. Meanwhile, in one large urban district, TRIP was used to launch an in-house recruitment center within the district office, allowing the district to offer early contracts to "cream of the crop" applicants, 60% of whom accepted their offers.

It is too early to speculate whether diminished demand for teachers will offset the impact of recruitment budget cuts, but the loss of these funds certainly threatens the progress that has been made and the stability of the infrastructure that has been built. Systems and networks developed over the past several years may be weakened as recruitment centers close and outreach and advertising budgets evaporate. Given historical problems in staffing, the outlook for low-performing schools does not appear promising. Similarly, teacher shortages in special education, math, and science will most likely persist without additional attention and funding directed toward resolving the problem.

Districts have already begun to contemplate what the budget cuts will mean for their recruitment operations. An urban district's director of human resources expressed particular concern about the impact of the budget cuts on the district's ability to find the teachers it needs. "I worry about next year," she said. "Losing TRIP money will be a big deal. Deinvesting in HR [human resources] is bad. We have a higher

investment in HR than ever. We bring technology on as quickly as we can, and just as fast they downsize us." She believes that she may be able to maintain the capacity of the human resources department through improved technology and other productivity measures, but total elimination of the state programs for recruitment will be very damaging. For this district, the end of TRIP will mean a loss of external recruitment capacity, and the cancellation of TAP will eliminate the $1,000 signing bonus. When the economy recovers, this district and other hard-to-staff districts will be at a disadvantage because they will not have the capacity they have now and will face more competition for teachers.

Eliminating funding for recruitment programs presents problems for compliance with federal accountability measures, as well. With the demand of the No Child Left Behind Act to place a "highly qualified" teacher in every classroom, districts may be hard-pressed to fulfill the requirements of the legislation. Their ability to meet NCLB's standard was in doubt even with the recruitment programs. These shortfalls will disproportionately affect those districts that serve the state's lowest-performing students.

Although schools and districts will not experience the effects immediately (because much of the money won't be exhausted until after the 2003-04 fiscal year), drastic reductions in recruitment funding are ill-advised. Policy-makers will need to consider the effects of NCLB, an expected growth in retirements, and differential student growth across the state when deciding on recruitment policy. As we have discussed earlier in this chapter, it appears there will still be a demand for teachers in the future, especially for those with credentials.

Conclusion

Clearly, California is in flux with regard to teacher supply and demand. New state and federal policies, economic problems, and changing demographics all have contributed to shifts in the numbers of teachers needed and hired, and subsequently to changes in the qualifications and distribution of teachers in the state. Looking ahead, these same factors will continue to play a role in the demand for teachers and will need to be considered by policy-makers as they seek to ensure that adequate numbers of teachers are available to staff California's schools.

Of course, even if the number of fully credentialed teachers grows, such growth does not ensure parity in teacher quality across all classrooms. As we have seen, teachers do not distribute themselves evenly across California's schools. Rather, some schools have great difficulty attracting fully credentialed teachers, and many teachers would probably choose no job at all over a job in what they perceive as a highly undesirable school. In certain key areas—mathematics, science, and special education—severe shortages remain. To have the best chance at staffing all classrooms with a competent teacher, the state as a whole needs a supply of teachers that exceeds the total number of available teaching positions each year. In this era of increased state, federal, and public pressure to improve student achievement, only an oversupply of teachers can ensure that the best teachers are recruited into the classroom to help all students perform up to California's world-class standards.

To accomplish these daunting goals, California policy-makers have a difficult job ahead of them. A critical lesson of the late 1990s is that, if untracked and unplanned, the supply of teachers can drop far below what is needed to meet the demand in the state's schools and lead to the hiring of thousands of teachers who are not fully prepared to meet the needs of their students. Although the supply of qualified teachers now appears to be somewhat closer to the demand, and despite the state's current economic crisis, the issues of teacher demand and distribution must not be neglected again. The state's recent investments in growing the teacher workforce provided some promising returns, but that progress is now threatened as the budget crunch has forced the state to reverse its teacher recruitment strategy. These decisions could be errors with repercussions that are felt long after the state rebounds, especially given the high number of teachers that are expected to retire in the next 10 years. As in the past, any future shortages are certain to be most intensely experienced by low-performing schools and districts and in chronic shortage areas, such as special education and math. Given limited available funding, it may appear foolish to invest now in tracking changes in teacher demand and distribution and reestablishing costly policies to address these issues. However, such investments may prevent California from reliving the dire teacher shortages of the 1990s in the future. We now turn to the topic of teacher preparation.

3. Teacher Preparation

Policy Update

- The No Child Left Behind Act (NCLB) and SB 2042 are efforts to improve teacher quality that are likely to place greater demands on the preparation system. At the same time, budget cuts and resulting campus-level decisions are likely to limit program capacity and possibly student enrollment.

Production of New Teachers

- Policy-makers responded to the rising demand for new teachers by increasing the capacity of the teacher preparation system, including alternative-route programs. The result was an increase in new credentials, from just under 13,000 in 1994-95 to just over 23,000 in 2001-02. This number is expected to remain high in the short term but may drop if demand for teachers is perceived as lessening or budget cuts limit capacity.
- The production of special education teachers has not risen as much as the production of general education teachers. The small growth in special education credentials has been largely in intern credentials rather than preliminary credentials.
- Intern programs have grown in funding and participants in recent years and may continue to do so as underprepared teachers are pressured to get intern credentials under NCLB. Pre-intern programs grew for a time but are now expected to shrink or change since pre-interns are not considered "highly qualified" under NCLB.

Teachers' Experiences in Teacher Preparation

- Participants in all routes give mixed reviews of their teacher preparation coursework. Alternative-route teachers report being especially burdened with the demands of simultaneously teaching and taking courses.
- The quality of the student teaching experience varies across all routes. However, alternative-route teachers student teach in the classroom of a veteran teacher less often and collaborate with and observe their supervising teacher less often.
- Unlike fully credentialed teachers who are eligible for BTSA, pre-interns and teachers on emergency permits typically do not receive mentoring or other formal on-the-job supports in their first years. Most interns, however, are provided with a mentor, although the quality of the experience varies.

Quality of Teacher Preparation

- Many teachers feel that, overall, they were adequately prepared by their preparation program, but few feel their preparation helped them a lot. In general, traditional- and alternative-route teachers rate the quality of their preparation about the same.
- Few teachers feel well prepared to use assessment data, adapt instruction for special education students, and meet instructional needs of all the students at their school, including English language learners.

As we documented in the preceding chapter, after school year 1996-97, the demand for teachers expanded dramatically and classrooms were filled with tens of thousands of teachers who had not yet completed—or, in many cases, had hardly even begun—their teacher preparation. The impact on the system of teacher preparation was immediate and profound. Many preparation programs were flooded with candidates who were already classroom teachers and who were looking for assistance on how to teach *tomorrow*. Incentives for students to complete their programs before entering the profession simply disappeared on many campuses as job offers came flooding in from local district administrators desperate to find an adult to head each classroom.

On the policy front, institutions of higher education came under pressure to increase the number of new credential recipients and to increase the quality of their preparation programs. In response, teacher preparation programs across the state, especially those in the California State University System, increased the production of candidates, made programs more flexible, developed "blended" undergraduate preparation programs, increased opportunities for undergraduates to enter the teacher pipeline, and began to pilot performance assessments for their candidates. The state also invested in the expansion of alternative routes into the profession in the form of intern and pre-intern programs to support working teachers without full credentials and assist them in taking the steps to complete their preparation.

In this chapter, we update what is known about these different trends in the context of the shifting demand for teachers we outlined in the preceding chapter. We begin with a discussion of current policy developments. We then look at the trends in the production of teachers entering the profession through different routes. Third, we describe teacher candidates' experiences as they move through the system of preparation. Fourth, we report teachers' perceptions of the effectiveness of their preparation. We conclude with a discussion of how policy-makers might rethink alternative certification.

Policy Update

Within the current changing political and economic contexts, teacher preparation programs are facing a series of conflicting challenges. The federal No Child Left Behind (NCLB) provisions may be increasing pressure for underprepared teachers to complete their programs. The implementation of SB 2042 will push programs to raise the bar for students to get their credentials. Recent budget cuts will leave higher education faculty with fewer dollars to meet these challenges.

No Child Left Behind

NCLB seeks to ensure that all children are taught by a "highly qualified" teacher. The specific provisions and implementation timeline are different for different teachers, depending on whether they are new to the profession or not; whether they teach elementary, middle, or high school; and whether they work in a program supported by Title I funds. Generally, all teachers in core subject areas (English, mathematics, science, foreign language, social science, and arts) are required to have a full credential or be working to obtain a full credential while participating in a structured intern program by the year 2005-06.

This legislation signals important changes for districts, teachers, and teacher preparation programs. To maintain critical Title I funding, districts are under increased pressure to hire only highly qualified teachers. In turn, pre-interns and teachers on emergency permits or waivers are being pressed to get their credentials or at least enter an intern program as quickly as possible, or risk losing their jobs. At the state level, the California Commission on Teacher Credentialing (CTC) is under pressure to stop issuing emergency permits and pre-intern certificates to be in alignment with the federal law. In addition, under NCLB, all multiple-subject teachers now must pass a Commission-approved subject matter test (currently the California Subject Examination for Teachers: Multiple Subjects [CSET]). No longer will prospective elementary school teachers be able to demonstrate subject matter competency through coursework.

SB 2042 and the Teaching Performance Assessment

Passed in 1998, SB 2042 made significant changes to the structure of the teacher credentialing process. The new credentialing system (scheduled for implementation in 2004) consists of two parts: teacher preparation and induction. Teacher preparation involves the courses and assessments teachers take to earn a preliminary (Level I) credential, and induction occurs during the first 2 years of teaching, when teachers take courses and the assessments necessary to earn a professional (Level II) credential.

SB 2042 includes a mechanism to assess the quality of teacher candidates by requiring prospective teachers to pass a Teaching Performance Assessment (TPA) before earning a preliminary credential. The state funded the Educational Testing Service (ETS) to develop the TPA, which will produce both formative and summative assessment data. The TPA can be used by any preparation program in the state—although programs are free to develop their own comparable assessment, as long as it is approved by the CTC. The assessment is based on the Teaching Performance Expectations (TPEs), which mirror the California Standards for the Teaching Profession and consist of four performance tasks based on the themes of: (1) Principles of Developmentally Appropriate and Content-Specific Pedagogy, (2) Connecting Student Characteristics to Instructional Planning, (3) Classroom Assessment of Learning Goals, and (4) Lesson Design, Implementation, and Reflection after Instruction. For the first three tasks, teachers' responses must be based on real students they are teaching; for the fourth task, they are observed in the classroom.

Although the TPA holds great promise for providing significantly better information on prospective teachers' skills and knowledge, the TPA program will place a significant burden on preparation programs. The CTC and ETS will train assessors for the first 2 years of implementation, but after that preparation programs must take over the task of training and calibrating assessors. At the same time, programs may need to invest additional resources to strengthen and align program content and prepare candidates to do well on the test. It is unclear how the state's teacher preparation programs will find the resources to implement the assessment, especially in today's budget climate. Full implementation of the TPAs was expected by January 2004, but recently the CTC decided to postpone implementation until the state's budget situation improves. However, teacher preparation programs are encouraged to continue with voluntary implementation of the TPAs.

Budget Cuts

At the same time that state and federal policies are likely to increase the demands on the system of teacher preparation programs, the state's budget problems are likely to make it increasingly difficult to meet those demands. As the largest producer of teachers in the state, cuts to the California State University (CSU) budget may limit the system's capacity. At the same time, a sharp rise in student fees may prevent some students from enrolling in preparation programs.

According to CSU, the system has already admitted more students than it can afford for the fall and winter 2003 terms and may need to deny admission to as many as 30,000 students in the spring 2004 term. CSU campuses have been admonished not to exceed enrollment targets and further compromise quality in already underfunded programs. Unlike in previous years, teacher preparation programs are no longer exempt from the enrollment targets. Besides enrollment, CSU expects additional impacts, including "larger and fewer classes, reduction of 2,300 staff and faculty positions, no salary increases for management employees and executives in 2003-04, and no salary increase for any employee in 2004-05" (CSU, 2003a). In addition, undergraduate student fees will increase by $474 annually, to a total of $2,544. Graduate fees will increase by $522, to $2,256 (CSU, 2003b). Both the University of California system and the state's community colleges will face similar budget cuts and tuition increases. Because spending decisions at the program level are typically decided at each campus, it is difficult to say precisely how these cuts will affect teacher preparation programs. However, it is reasonable to expect that some teacher credential candidates may have difficulty accessing the classes they need, while others may have difficulty paying the higher tuition.

Production of New Teachers

In the 1990s, when demand for new teachers was still rising and the state economy was robust, the state enacted a number of policy efforts to increase the capacity of the teacher preparation pipeline. These efforts paid off, increasing the overall production of new credentials and expanding the capacity of alternative-route programs to support and prepare working teachers who did not have full credentials.

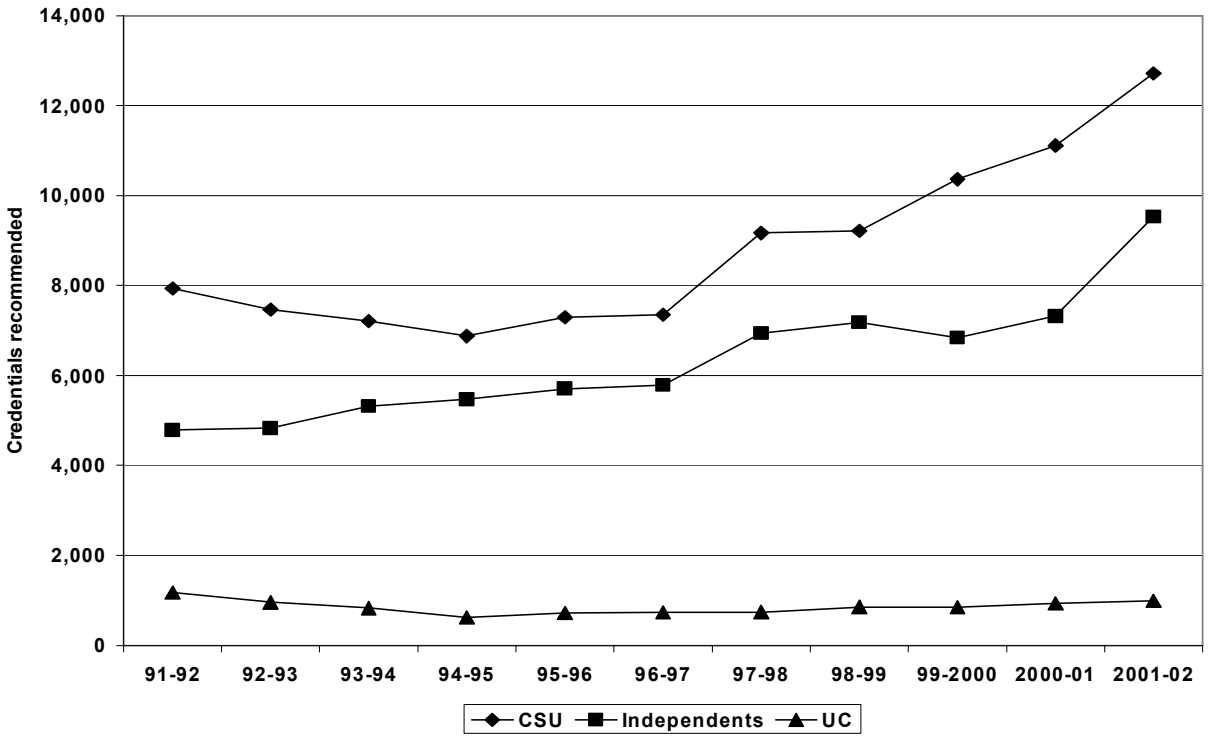
The increase in credential production, coupled with the decreased demand for new teachers discussed in Chapter 2, has put the state closer to having enough fully credentialed teachers to staff its classrooms. Unfortunately, the story isn't all positive: the production of special education teachers hasn't kept up with that of general education teachers, and there are still a great number of working pre-interns and emergency-permit teachers who have yet to even begin a teacher preparation program.

In this section, we present data on how the production of new credentialed teachers has increased over the past several years and compare this progress with disappointing trends in the production of special education teachers. We also examine trends in the numbers of teachers participating in an intern or pre-intern program. We follow this with a discussion of several policy and economic factors that are likely to influence the production of new credentials and the size of the intern and pre-intern programs in future years.

New Credentialed Teachers

Overall, the state has gone from a low of just under 13,000 new credentials produced in 1994-95 to a high of just over 23,000 new credentials produced in 2001-02 (the most recent year of data). The data show that the CSU system has responded to the state's teacher shortage by increasing its production of newly credentialed teachers. In addition, the private sector has increased its production of newly credentialed teachers at about the same rate as the CSU system. However, the University of California campuses have continued to produce roughly the same small number of newly credentialed teachers. Figure 3-1 shows the trends over time.

Figure 3-1
First-Time, New-Type Multiple- and Single-Subject Credentials: 1992-02



Sources: CTC (1998a, 1999a, 2000d, 2001b, 2001d, 2002a, 2003c); SRI analysis.

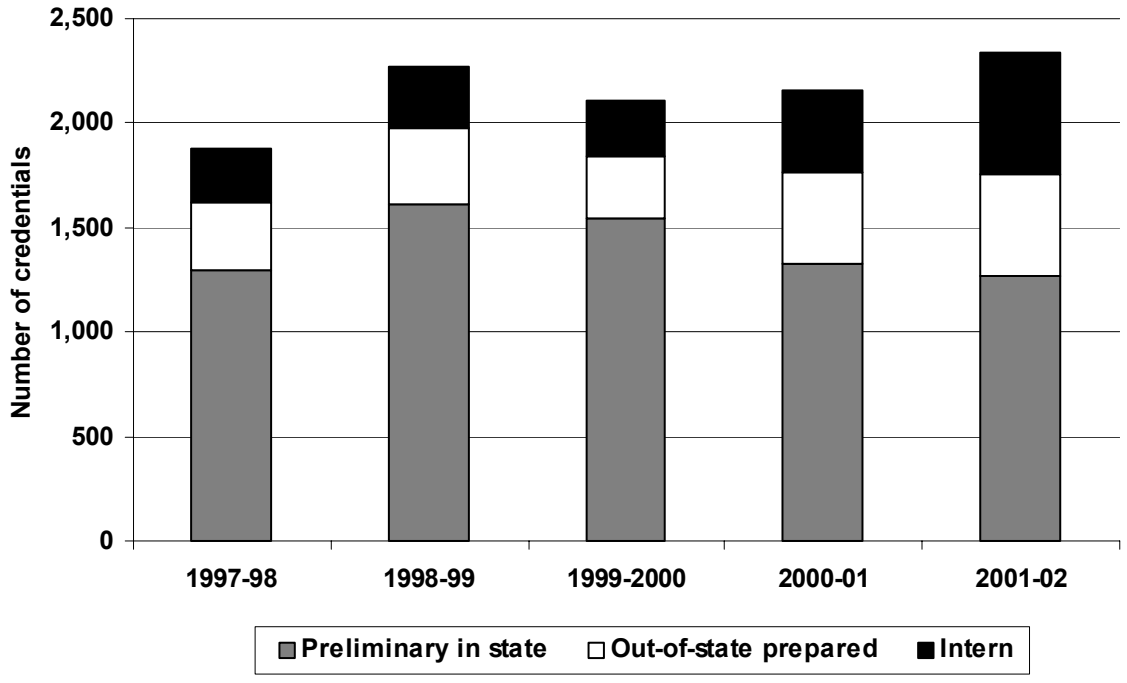
Over the past decade, the growth in production has been fairly steady among campuses serving high-need districts, with a dramatic increase in recent years. CSU campuses in the Los Angeles basin and the San Francisco Bay Area increased their production by more than 33% from 2000-01 to 2001-02.

Much of the increase in the production of newly credentialed teachers in the private sector came from the expansion of the programs at National University and Chapman University. The growth of the National and Chapman teacher education programs appears to be a result of their responsiveness to the needs of career changers and emergency-permit holders who work full-time while earning their credentials. Although comparatively expensive, these independent programs are considered more "user friendly," offering classes at many locations at convenient times. In addition, these two programs have the flexibility to expand course offerings so that the classes that credential candidates need are always available.

New Special Education Teachers

The trend in the production of special education teachers has not matched the growth of single- and multiple-subject credentials. As we reported in the preceding chapter, about 18% of all special education teachers (nearly 6,500 teachers) do not have at least a preliminary credential. As Figure 3-2 illustrates, the production of special education teachers has gone up a little, but it is still very small compared with the need. The growth in special education credentials has been largely in intern credentials. In fact, the production of fully credentialed special education teachers has actually decreased over the past few years as demand has risen.

Figure 3-2
First-Time, New-Type Education Specialist Credentials Issued, 1997-98 to 2001-02



Sources: CTC (2003d, 2003e); SRI analysis.

The fact that almost one in five special education teachers do not hold at least a preliminary special education credential is critical because of the specialized knowledge and skills needed to work with this population of students. Specifically, special education teachers need to be aware of legal issues surrounding the federal Individuals with Disabilities Education Act (IDEA), which requires that special education students' needs be met through an individualized education program (IEP). Special education teachers also need a wide repertoire of instructional strategies through which to meet IEP goals. In addition, general education teachers frequently rely on special education teachers as a source of information on how to assist students in meeting IEP goals. In the absence of training across these areas, underprepared teachers face real challenges in special education classrooms, as the story of Nancy demonstrates.

The Challenges of an Underprepared Special Education Teacher

Nancy is an intern in her third year of teaching special day classes at a high school in a rural district. Despite not having completed her special education credential, she is the most experienced and most highly trained teacher in the department of three teachers; the others are also underprepared and are in their first or second year of teaching. There is a schoolwide focus on aligning instruction to standards, so the special education department looked at students' average performance level, which was fourth grade, and decided to teach all students to fourth-grade standards. For example, the department purchased a relatively scripted math program in which students complete a worksheet each day to spiral through the curriculum. Nancy has different students work on different worksheets from the fourth-grade sequence. After the start of the year, Nancy provides no explicit instruction, instead walking around and monitoring students' progress through their fourth-grade worksheets.

People knowledgeable about special education would be likely to criticize the strategy of teaching all high school special education students to fourth-grade standards. Since not all students are functioning on a fourth-grade level, work is not tailored to students' IEPs. Furthermore, Nancy hands out worksheets without providing the instruction suggested by the curricular series. Unfortunately, none of the underprepared special education teachers at this school are aware of the problems of this approach, and they do not have the background, knowledge, or skills to develop a more suitable educational program. Although this example is somewhat extreme, it highlights the potential problems of having a high percentage of underprepared special education teachers.

The state has made substantial efforts to eliminate the use of emergency-permit teachers in general education but has not made as much progress among special education teachers. At the same time, the CTC plans to continue to grant emergency permits for special education teachers.

Interns

Interns are working teachers who participate in structured programs to complete the coursework and other requirements for a full credential. Since intern programs were first introduced in 1994, participation has grown steadily. As Table 3-1 illustrates, funding for intern programs increased dramatically from 1994-95 to 2001-02. Budget cuts in the 2002-03 school year reduced state support for the intern programs, but most programs were able to find resources from other funding streams to continue the increasing participation trend.

Table 3-1
Internship Program Participation and Funding Trends

Fiscal year	Number of funded programs	Number of interns served	Number of districts involved	Funding (millions)
1994-1995	29	1,238	150	$2.0
1995-1996	23	1,471	178	$2.0
1996-1997	23	1,888	186	$2.0
1997-1998	52	3,706	271	$4.5
1998-1999	58	4,340	330	$6.5
1999-2000	65	4,827	408	$11.0
2000-2001	75	5,649	465	$21.5
2001-2002	81	7,236	594	$31.8
2002-2003	79	7,505	762	$18.8
2003-2004*	77	8,807	Approx. 800	$22.0

Sources: CTC (2001e, 2001f, 2003g).

**Estimated numbers.*

Pre-interns

Pre-interns are working teachers who participate in programs designed to help them meet the requirements for entering an intern program. They are not yet enrolled in a teacher preparation program. Starting in 1998, the number of pre-intern programs and participants grew rapidly for four consecutive years, with more than 10,000 participants during the 2001-02 school year. However, during the 2002-03 school year, both the number of participants and the number of programs shrank. The programs are expected to shrink even more during the 2003-04 school year, for at least three reasons. First, pre-interns do not meet the "highly qualified teacher" requirement of the federal No Child Left Behind Act. Second, funding for the programs during the 2003-04 school year was reduced. Finally, the easing of the state's teacher shortage has meant that districts are less likely to have to hire teachers who have not met subject matter requirements. However, until NCLB has been fully implemented, pre-intern funds can continue to be used to move working underprepared teachers toward enrolling in an intern program. Table 3-2 illustrates the trends in pre-intern program participation and funding.

Table 3-2
Pre-intern Program Participation and Funding Trends

Fiscal year	Number of funded programs	Number of pre-interns served	Number of districts involved	Funding (millions)
1998-1999	18	955	41	$2.0
1999-2000	43	5,800	316	$11.8
2000-2001	59	7,694	330	$11.8
2001-2002	69	10,534	410	$11.8
2002-2003	58	8,843	N/A	$17.7
2003-2004*	48	5,200	N/A	$10.3

Sources: CTC (2001e, 2201f, 2003g).

**Estimated numbers.*

Looking Ahead: The Future Production of New Teachers

Looking ahead, what can we expect in terms of the production of new teacher candidates? Again, there are some countervailing forces. NCLB is expected to have an impact on the number of new teachers seeking credentials. Already, preparation programs are seeing increasing demand for courses as some emergency-permit teachers scramble to become NCLB compliant. Also, in spring of 2003, many districts handed out "pink slips" to teachers because of an uncertain future. As the most likely not to be rehired, either because of NCLB or because of budget cuts, emergency-permit teachers were often motivated to get their credentials in order. Sean's story is an example.

Motivated to Complete a Credential Program

Sean is on an emergency permit and takes teacher preparation classes at National University. In fall of 1998, his first year of teaching, he took the MSAT and failed. He continued taking courses at National University and by fall of 2002 had completed all of his coursework requirements for a teaching credential. However, during his 4 years of teaching, he had never attempted to retake the MSAT and therefore had not demonstrated the subject matter competency necessary to begin student teaching and obtain a preliminary credential. In fall of 2002, Sean reported being happy to have completed his coursework but had no immediate plans to retake the MSAT so he could begin student teaching. In the urban middle school where he taught, 41% of the teachers were teaching without a preliminary or clear credential, and he felt no pressure to complete his program.

In the spring semester of 2003, his attitude changed. His district sent out notices to all the teachers at his school who taught on emergency permits or pre-intern certificates (63 teachers) that their teaching positions would be released (i.e., they would be bumped into a substitute position) when their contracts expired if they had not improved their credential status. Teachers on emergency permits, including Sean, were required to enroll in the district's pre-intern program and attend test preparation classes to help them meet subject matter competency requirements. By June 2003, Sean had taken the CSET and was scheduled to student teach in the fall. He plans to complete his credential by December 2004. The pressure that the urban district applied as a result of NCLB, the availability of the pre-intern program, and widespread issuance of pink slips to credentialed teachers in surrounding districts motivated Sean to complete the final requirements for a credential.

SB 2042 may also raise the demand for teacher preparation courses in the short term as credential candidates press to complete their credentials under the existing rules, which are generally seen as less burdensome.

Because interns meet the "highly qualified" requirement of the No Child Left Behind Act, the state is likely to see increased enrollment in intern programs. Given the new legislation, districts are eager to reclassify emergency-permit teachers and pre-interns as quickly as possible. In one district we visited, the County Office of Education trained credential analysts in each district to identify teachers on emergency permits who would qualify for intern programs (they had met subject matter requirements). The coordinator for one suburban district reported, "With NCLB, there's a push to convert anyone who can be to intern [status]." In fact, the state received requests for support for more than 9,600 interns and was able to fund only about 8,800. In addition, the state received requests for another 200 interns after the application date passed had and was unable to fund those placements.

The full impact of these various factors will not be known for some time, but early indications from the fall 2003 enrollments at selected campuses suggest that the state is likely to experience continuing high levels of credential production in the immediate term. However, budget cuts clearly may limit further growth. Campuses as different as Humboldt State University, CSU Los Angeles, CSU San Marcos, and CSU Long Beach have had to limit, or plan to limit, the number of new enrollees. This trend seems to be a result of both budget cuts and the need to accommodate the large number of teacher candidates already in the pipeline. For example, CSU Los Angeles has more than 400 applications for the winter 2004 term but will admit only about 120 new credential candidates. In part, the limits on new enrollees at CSU Los Angeles are a result of the record number of credential candidates enrolled in student teaching. In this case, limited resources are being focused on teacher candidates working to earn a credential before the new SB 2042 requirements take effect. At CSU Long Beach, enrollment is also being limited as a result of budget cuts.

Teachers' Experiences in Teacher Preparation

There are many routes into the teaching profession in California. The so-called traditional route has historically been the most common path: after earning an undergraduate degree, prospective teachers complete a year of coursework, student teach, and then earn a credential. Some progress through their program full-time, while others go part-time, often taking convenient nighttime classes.

"Alternative-route" is a term coined to describe a variety of routes into the profession that share the common experience that participants begin to teach before they earn a credential. The intern route is for individuals who have demonstrated subject matter competency. The program typically involves prescribed coursework, as in the traditional program, along with some support through a mentor and sometimes collaborative meetings. Pre-intern programs serve not fully credentialed teachers who have not yet demonstrated subject matter competency. Typically, these programs aim to help teachers prepare to pass subject matter competency tests. Some programs also

require that pre-interns attend a certain series of workshops covering topics outside of test preparation, such as classroom management. Other programs have a mentoring component designed to provide pre-interns with support at their school site.

The emergency "route" is not a route at all—it is an ad hoc and individual arrangement in which classroom teachers without credentials need do no more than show they have pursued minimal coursework requirements each year. They are given 5 years to complete their credential. Emergency-permit teachers tend to proceed part-time through traditional programs, which, of course, have not been designed with their needs in mind.

Regardless of whether teachers take a traditional, an alternative, or an emergency route into teaching, they need to meet the same basic requirements for a preliminary credential. They must complete a series of courses in pedagogy and must demonstrate mastery of the subject matter they are planning to teach. They must complete a period of student teaching, during which time they are observed in the classroom. In addition, they must pass a battery of tests required by the state.

Moreover, there can be great variation within each route because prospective teachers' experiences can vary dramatically. Their courses may be demanding or not, field experiences may be valuable or not, and the teacher candidates may or may not take full advantage of their opportunities to learn. Teacher candidates may complete the program in a year, or they may be enrolled in the program part-time, just take a course or two at a time, and stretch their preparation out over many years. Below we describe the range of experiences of teacher preparation participants, noting, when applicable, if those variations can be attributed to the particular route they have chosen.

Coursework

Not surprisingly, teacher reports on the effectiveness of their coursework vary from program to program, and even within programs, from class to class. Harold, a teacher prepared through a traditional route; Jane, an intern; and Jose, a teacher on an emergency permit who is taking some teacher preparation classes—all give mixed reviews of their coursework.

Varied Perspectives on the Value of Teacher Preparation Coursework

Harold came to his CSU teacher preparation program with a strong academic background. His experiences in his required classes were mixed. On one hand he was frustrated by the fact that he had to retake math courses because his UC math credits (which he felt were more difficult) did not transfer as the equivalent to CSU liberal studies math courses. Overall, however, he felt he was able to make the most of his experience. "You're given the [teaching] tools to work with. It just depends on whether you want to take them above and beyond and do something with them, or just stay at the base level. [If you only met the minimum requirements] you would have a really rough first year [of teaching]." He did express concern, however, about the low level of effort required by some professors and noted that he "could not imagine [some of his classmates] in a classroom by themselves."

Jane originally began teaching on an emergency permit, then enrolled in an intern program after passing the subject matter competency test. She said, "There have been beneficial things from the university. I had a Language Policies course that I didn't like in the fall—it wasn't very well put together—but I had a follow-up class this spring in the content area that dealt with teaching ELL students in content areas. Believe it or not, a lot of the methods that you use for teaching English language learners are fabulous methods for teaching all my students. They are strong methods." While Jane has critiqued some of her classes for seeming "disconnected" and "unrealistic" it is apparent from her classroom that she is applying much of what she learns in her program.

Jose, a teacher on an emergency permit, had both positive and negative comments about the usefulness of his teacher preparation coursework. He said, "I've been in college for a long time. If I'm not a smart guy, I am a sponge. I do absorb, and I'm a quick reader. So the textbooks are awesome…It's so great to take the class and be in a classroom so you can implement those things immediately." On the other hand, he doesn't always feel his courses address his needs for being able to immediately apply what he's learned. He noted, "My perception is that this is the theory, and we're seven weeks into the semester, and so now I really need to know, how do I do that in the classroom?...There are articles and some textbooks that talk about the importance of this, and so now I want to know, how do I do it?"

Teachers, regardless of route, seem to share a perception about one factor that lends quality to a preparation course: a faculty member with recent experience in K-12 schools. As one traditionally certified teacher said, "[An independent university] really offered a great program. The teachers were actually people who had been in the classroom." Another traditionally certified teacher felt privileged that most of her instructors were also full-time K-12 teachers. She stated, "I felt like I was really learning from people who taught a full day and then came and taught us. I'd give it a 5 [on a scale of 1 to 5]. It was really good." Jonathan, who participated in both an undergraduate teacher preparation program and a master's program before beginning to teach, enjoyed having both a professor and classmates with classroom experience. "[The university] really offered a great program. The professors were actually people who had been in the classroom. Also, in my classes, I was with other teachers. In college, no one had taught yet. [For my graduate program] I was in this room filled with teachers and listening to all their experiences and getting their feedback. It was an amazing opportunity to have before teaching."

As we noted above, coursework requirements are basically equal for traditional- and alternative-route credential candidates; in fact, these different types of students are often taking the same classes side by side. The key difference is whether courses are taken before or during their first few years of teaching, often making for dramatically different teacher preparation experiences. Interns and others who are teaching while taking teacher preparation courses can face extremely burdensome schedules. In our case studies, interns spoke of the inherent difficulty of teaching all day and then attending class for several hours one or more evenings a week. Given this workload, it seems unlikely that interns are able to absorb and apply as much from their coursework as they could if their schedules were less demanding. An even worse possibility is that interns might neglect their teaching responsibilities because of the time burden. Jose's and Jane's stories are examples of this dilemma.

Teaching All Day and Studying All Night

Jose teaches a full load that includes some of the school's more challenging students while taking four teacher preparation courses in the fall and five in the spring. At this pace, he will earn a credential in a year and a half. However, with up to 20 hours a week spent in courses, Jose already talked about feeling burned out by the combination of being a full-time teacher and a full-time student.

As an intern, Jane teaches all day and then takes courses in the evening and on weekends. The demands on her time have forced her to make a difficult choice: "I know last semester I had to make a decision: was I going to cut back on the quality of preparing for my students or was I going to cut back on the quality of prep for the classes I was taking? And my classes I am teaching meant more to me than the classes that I was taking that seemed superfluous. So I got what I considered to be poor grades."

Student Teaching

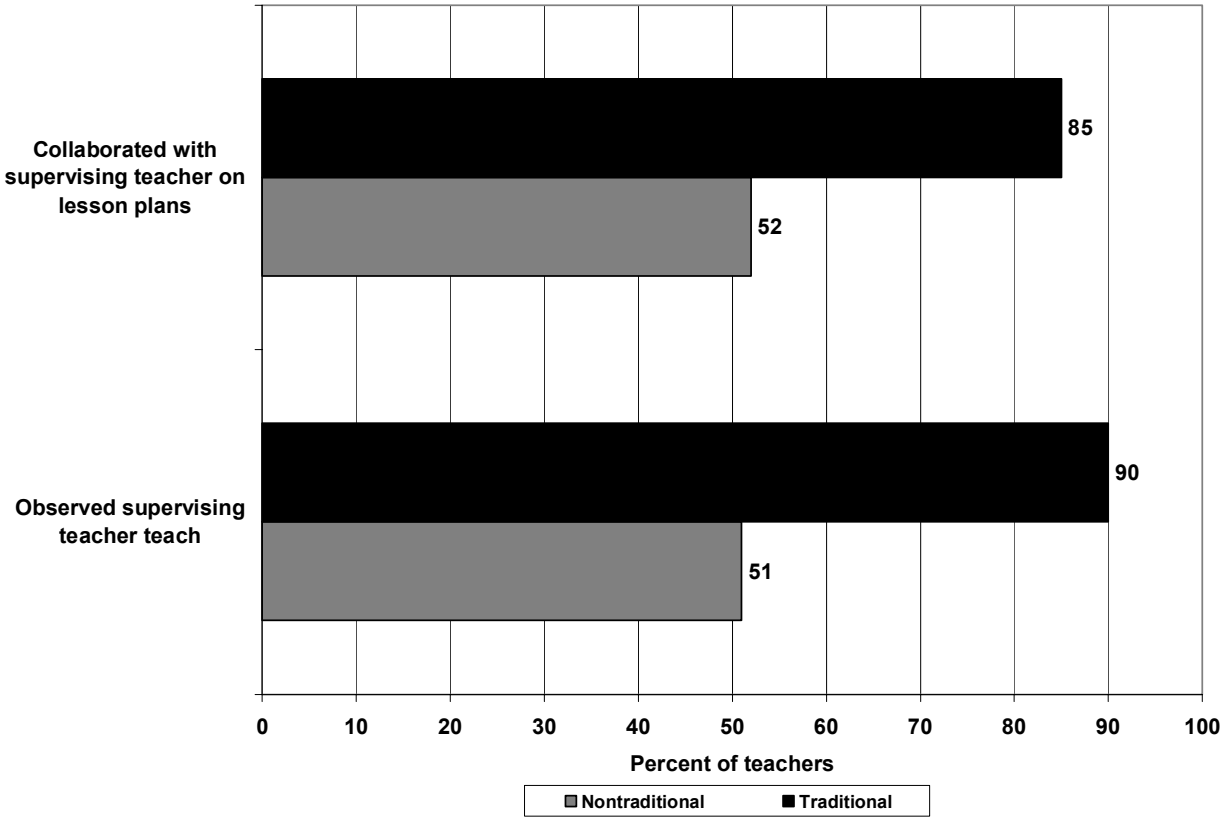
Student teaching is considered by many to be a particularly important part of teacher preparation. Indeed, in our survey, 65% of teachers reported that student teaching was the source of "the most valuable lessons of my teacher preparation experience." It is also the area of teacher preparation where alternative and traditional routes appear to diverge most significantly. In a traditional program, student teaching ideally involves many hours of observing in an experienced teacher's classroom and gradually assuming more responsibility for instruction. The student teacher's first attempts at teaching are typically all under the guidance of the more experienced teacher, who can then provide feedback on the strengths and weaknesses of the student teacher's performance.

In alternative programs, the "student teacher" is already teaching and thus does not have as much time to observe veterans. Student teaching is the culminating experience in the program—so those who entered teaching as an intern would not typically student teach until their fourth semester as a classroom teacher. For the three semesters prior to student teaching, the nontraditional student may receive some support from a mentor, but not the amount of time observing and being coached that is possible in the traditional model. A few intern programs require interns to student teach during their

summer break or when they are off-track, so that, in a sense, they complete "traditional" student teaching as the final requirement in their credential program. However, in the majority of programs, teachers "student teach" in their own classrooms with a university or district supervising teacher completing a required number of observations.

Given the differences in what it means to "student teach" in traditional and nontraditional programs, it is not surprising that traditional- and nontraditional-route teachers report different student teaching experiences. As Figure 3-3 illustrates, traditional teacher preparation programs provide far more opportunity for collaborating with the supervising teacher on lesson plans and far more opportunities to observe an experienced teacher in the classroom.

Figure 3-3
Differences in Student Teaching Activities between Traditional and Nontraditional Routes



Source: SRI Survey of California Teachers (2003); SRI analysis.

Note: See Appendix B for additional information.

Of course, not all traditionally prepared teachers benefit from their student teaching, and not all nontraditionally prepared teachers are less effective because their student teaching experience was different. Harold and Jonathan, both traditionally prepared, describe substantially different experiences in student teaching.

Different Perspectives on Student Teaching

Harold found that the most beneficial part of his experience was student teaching because his university supervisor came weekly, and "she was very, very strict and expected a lot of us. But it was nice because…she gave a lot of really practical suggestions that were useful. I also felt the work I did was appreciated—if I put in a lot of work, she gave a lot of good feedback, so I felt I learned a lot more."

Jonathan's student teaching was less useful than he had hoped. He described the master teacher he was assigned to as "burned out" and noted, "By the second or third week [of his student teaching], she [the master teacher] let me have control of the classroom, and she would leave. There would be hours she wouldn't come in the classroom…It was nice, but it was also a little too much in the beginning. I don't feel I got as much from it as I could have."

On-the-Job Support

Traditionally prepared teachers complete their coursework, earn their credentials, and then begin to teach. At this point, they are eligible to participate in the state's Beginning Teacher Support and Assessment (BTSA) program, which provides them with, among other things, support from an experienced mentor (we discuss this program and other induction topics in the next chapter).

Interns also typically receive some type of formal on-the-job support from their programs. This is one of the major strengths of such programs and, when well implemented, can provide teachers the practical assistance they need to succeed while they are completing their preparation. Jane's and Jack's experiences are positive examples.

The Importance of Mentor Support

The aspect of being in the intern program that Jane seems to like the most is the support she gets from the head of the program, whom she described as an "outstanding person. She really gives a lot of guidance. And that is what I think will really turn around the teacher education program here in [my rural region]—is having a resource like that. She is almost, in a sense, another hand to guide you and protect you, and that's really fabulous…She comes into the classroom every month and visits and gives ideas for improvements—constructive criticism, [like] 'maybe change this,' or 'you're doing good in that.'"

Jack started his teaching career as a pre-intern, then moved into an intern program. He retained the same mentor during both phases but noted real improvements during the intern phase, when the mentoring component was given much more structure by the intern program coordinator. At this point, Jack's comments about his work with his mentor became much more positive. He noted, "We meet a lot. In her room we'll do a quick lunch or an after-school [meeting]. I'll talk to her about what I'm doing curriculumwide, or [for example] I did a PowerPoint [project] and I know she does PowerPoint, so I wanted to see her rubric." The intern program coordinator also came out to visit Jack's classroom several times. Each time, she gave Jack information about how to improve his teaching.

In contrast, teachers on emergency permits often do not receive formal mentoring or on-the-job support. They typically do not belong to an established program and are not

eligible for BTSA until after they have been teaching for some time. Pre-interns may or may not receive mentoring or other support for teaching, and the mentoring they receive, if any, appears to be of mixed quality. Jack, whose mentoring experience was positive as an intern, did not find value in the mentoring he received previously as a pre-intern—despite having the same individual as a mentor in both programs. Although he taught some of the school's most struggling students, Jack received minimal assistance through his pre-intern program. He was provided a mentor, but he reported that the experience was not very useful. In speaking about his mentor, he noted, "[The pre-intern program] provided me with a mentor teacher, our department head. She would come in and visit the class, but…I don't know how visiting helps me. To have someone come in and say, 'You're on the right track, etc.' is helpful, but she doesn't teach what I teach, so it wasn't like, 'This would have been good to do,' or 'You could have added this or that…'[S]he was just making sure there's not total chaos in here."

One explanation for the low intensity of pre-intern mentoring is insufficient funding. In all the districts we studied, pre-intern programs operate on tight budgets. In one rural district, the pre-intern program receives $2,000 per pre-intern to cover all costs, including training, supports, and overhead. With such limited resources, the district pays pre-interns' mentors $500, compared with $750 for interns' mentors and $1,000 for BTSA mentors. These pre-intern mentors are supposed to spend 30 hours with the pre-intern over the course of the school year, attend training—for which they are compensated if it occurs outside of the contract—and complete logs to track contact hours spent with pre-interns. Mentor stipends come out to under $17.00 per contact hour, or $50.00 per month, before taxes. Not surprisingly, the district reports that it is hard to attract high-quality mentors for pre-interns.

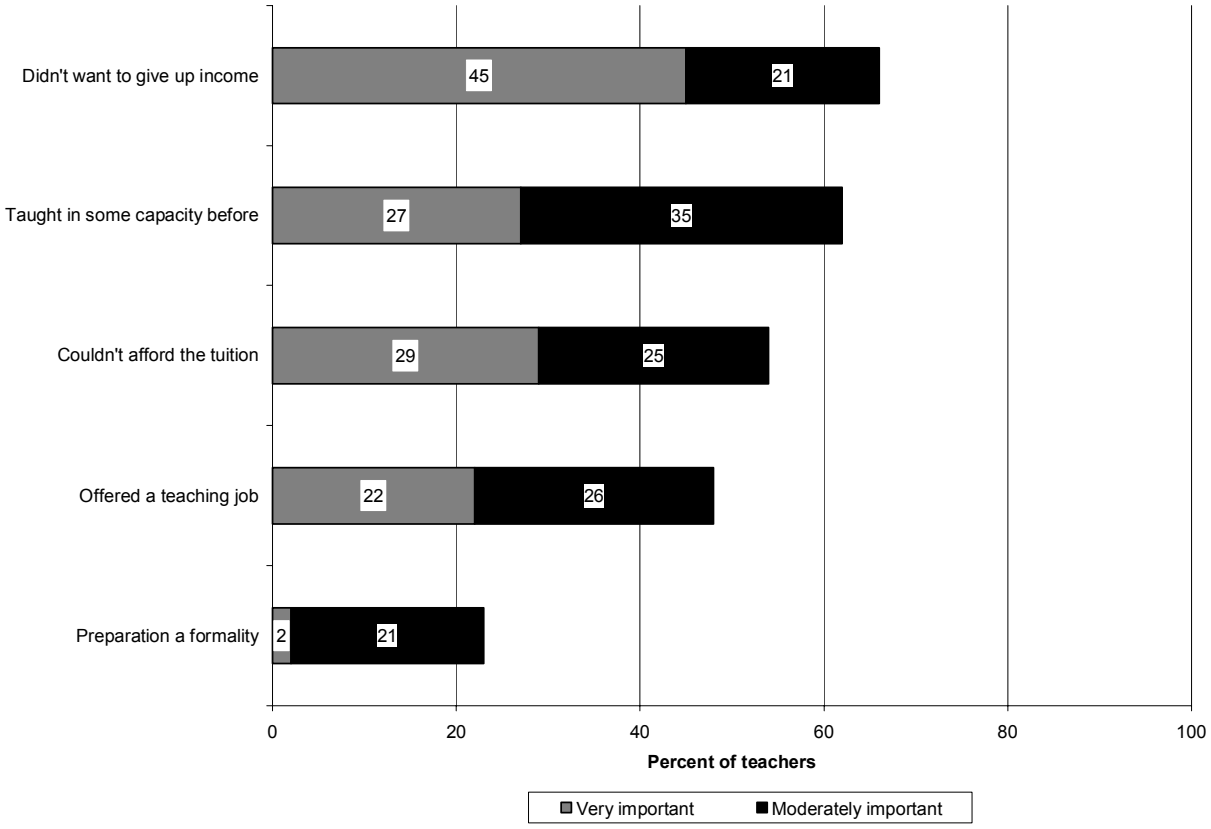
Pre-interns, like teachers on emergency-permits, often have to rely on their own initiative to access informal supports. And getting informal help is not always easy, as one veteran teacher's assessment of a new teacher suggests. She said, "Veronica's great. She's flying on her own. I haven't been in her classroom, but she seems more confident. Just that. At first it was 'scary kids' and 'I don't know what to do.' She'd call me during this [her planning] period and say this happened and that happened. She doesn't call anymore. So I take it she's more settled." Unfortunately, the veteran interpreted the fact that the pre-intern was no longer actively seeking help to mean that the pre-intern was "flying on her own." In fact, the veteran had no information that conclusively showed the teacher did not need assistance, only that she was not taking initiative to get support.

Reasons for Choosing Alternative or Emergency Routes

Teaching full-time and earning a credential at the same time is difficult, whether the teacher holds an emergency permit or is enrolled in a pre-intern or intern program. When asked why they chose to enter teaching through a nontraditional route, teachers cited financial concerns and their previous experience most frequently. The majority of alternative-route teachers said they entered teaching without completing preparation programs because a teaching opportunity came up, they could not afford a full-time

program, they already had some form of teaching experience, or they did not want to give up income while attending a preparation program (Figure 3-4).

Figure 3-4
Why Did You Teach Prior to Earning a Credential?



Source: SRI Survey of California Teachers (2003); SRI analysis.

Note: See Appendix B for additional information.

Very few teachers decided to begin teaching without completing a credential because they felt that preparation was "basically a formality" that would not improve their job performance. As one underprepared teacher stated in retrospect, "Some of [the decision to teach prior to completing a program] is just ignorance, I think. You think you're ready to do it, but you're not really aware of what that all involves. I had worked a lot with children…The other thing was that I…was excited to learn things and I wanted to try them out right away. I didn't want to sit and think about them. I had done that for 4 years in college, and that was fine, but I was just anxious to get started doing something." This teacher enrolled in a district intern program. She chose this program over other options partly because it was free. Michael is another example of a teacher whose decision to take an alternative route was influenced by financial concerns.

The Challenges of Completing Teacher Preparation Quickly and Inexpensively

Michael substitute taught for several months. While substitute teaching, he began taking credential classes at an independent university. He was hired on an emergency permit as a middle school health teacher in August 2001 and then assigned to teach English in November 2001. He chose the independent university because it was "fast and easy." As he said, "I just wanted to do it as fast as I could because I wanted to get teaching because I needed the income in order to live…I wanted to just get it done with." In his second year of teaching, Michael was hired as a middle school math/science teacher in a suburban district. He filed for a preliminary credential in spring of 2003, at the end of his second year of teaching. Michael acknowledged that his chosen route through teacher preparation might not have been the best: "When I look back, I know that there are so many things I could have done differently, but each year is a learning experience."

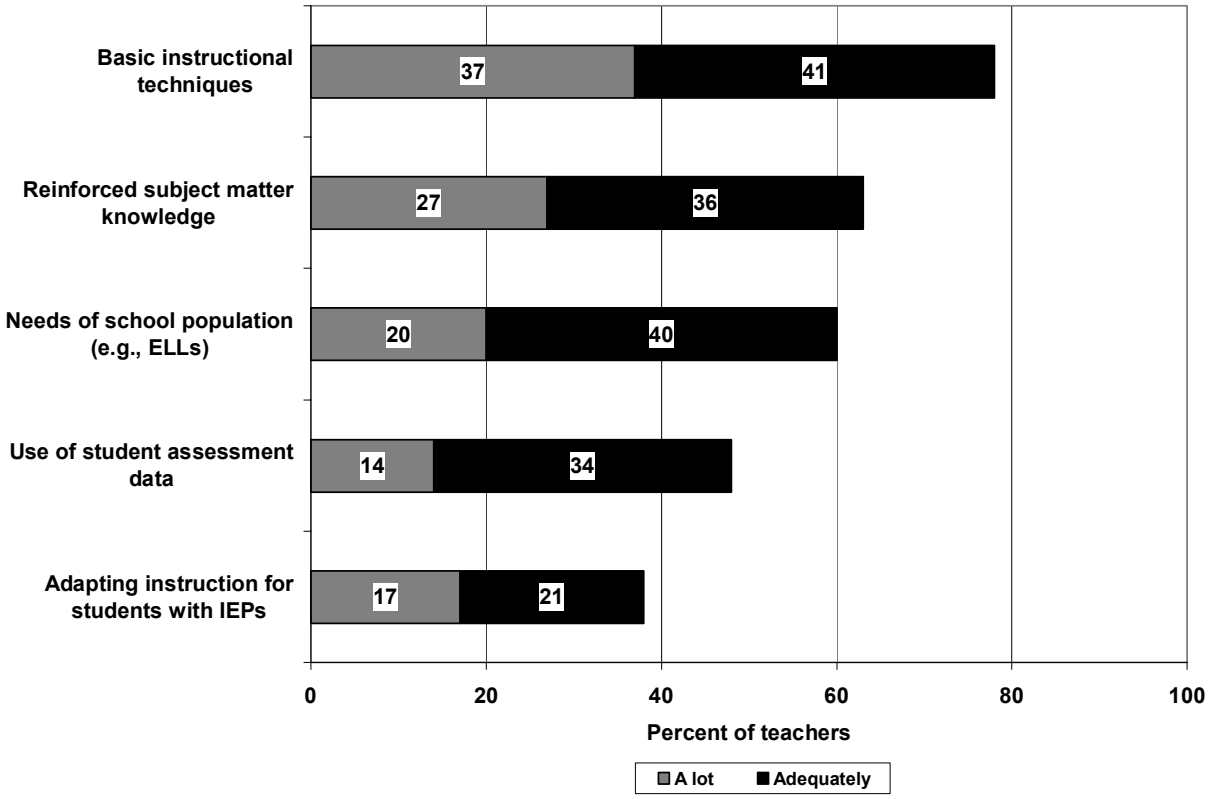
The Quality of Teacher Preparation

Regardless of the route through which teachers enter the profession, are they getting the preparation they need to succeed in the classroom? The ultimate answer to that question would require a more sophisticated and accessible data system than the state currently has. When we examine the characteristics of prospective teachers' preparation experiences, the one constant finding is the great variation—across programs, across campuses, and across routes. As just noted, however, teachers who choose to forgo the traditional route tend to get less support in their early years and certainly have a tougher time balancing the demands of school and their work.

Still, when we surveyed teachers directly about the perceived overall quality of their preparation, we found no differences related to the routes teachers pursued.[1] On the positive side, more than half of teachers prepared in California think their program at least adequately prepared them in basic instructional techniques appropriate for the subject matter in which they are credentialed, knowledge of the subject matter in which they are credentialed, and the basic skills needed to meet the instructional needs of the student population at their school (e.g., English language learners or students from diverse cultural backgrounds) (Figure 3-5). On the negative side, far fewer teachers reported that their preparation in these same areas prepared them "a lot." Only 37% reported that their preparation program prepared them "a lot" for basic instructional techniques, while 27% felt "a lot" prepared for subject matter knowledge and 20% for the needs of their school's population.

[1] There were no statistically significant differences between the ratings of traditional- and alternative-route teachers.

Figure 3-5
Perceived Effectiveness of Teacher Preparation



Source: SRI Survey of California Teachers (2003); SRI analysis.

Note: See Appendix B for additional information.

Teachers' perceptions of the effectiveness of their preparation are more problematic in two other areas that are especially relevant in the current environment, where high-stakes testing for almost all students is mandated by NCLB. Only 48% of teachers felt at least adequately prepared to use student assessment data to plan instruction, and only 14% believed that they were prepared "a lot" to use student assessment data. Of even greater concern is the fact that only 38% of those teachers felt at least adequately prepared to adapt instruction for students with IEPs, and only 17% felt their program prepared them "a lot" in this key area. Clearly, teachers do not feel that they are prepared to meet the needs of students with special needs.

Rethinking Alternative Certification

Teacher preparation in California is in the midst of period of reform and change. Given the impetus from No Child Left Behind, California will certainly seek to end the emergency permit and the pre-intern certificate. Yet, given the expected retirement boom described in the preceding chapter, as well as the likelihood of a robust economy in the future, policy-makers will need to continue to support the production of a large number of teacher candidates, especially in shortage areas like mathematics, science, and special education.

State policy-makers have chosen to maintain and expand the intern program—at least in the near term. The question policy-makers will have to face is, are there ways of strengthening it? This question is especially critical since interns, like all underprepared teachers, are concentrated in schools serving the lowest-achieving students.

As we have illustrated, intern programs are extremely burdensome. Too often, teachers are forced to choose between preparing for their preparation classes and preparing for their own classrooms. Part of the problem of burden is a result of the fact that program completion is based on accumulating course credits rather than reaching a level of proficiency. Just recently, the state has introduced a fast-track option that allows interns to demonstrate competency through a test and the completion of the Teaching Performance Assessment. But the option is very new and not well known. Currently, nearly all intern programs simply follow the same state requirements for course completion as traditional programs. In addition, as intern programs are currently designed, the student teaching component comes late in the program and provides fewer opportunities for learning than traditional student teaching.

Addressing these problems will require a reconfiguration of intern programs. By extending a preservice component, intern programs might be able to strengthen the learning opportunities of their participants. At least one prominent program in the state is attempting to do just that, as detailed below.

Improving the Connections between Internships and Induction

The Los Angeles District Intern Program began in 1984 and has recommended more than 6,000 teachers for teaching credentials. The program has been revised beginning in the 2003-04 school year, with some significant changes that seem likely to improve the quality of an already popular program. First, the program has extended its preservice component. All interns are required to complete 240 hours (6 weeks) before entering the classroom. During the preservice period, interns are assigned a mentor, observe exemplary classrooms with their mentor, and get some practice teaching experience. Before assuming responsibility for a classroom, interns are rated by their mentor. If the mentor has concerns about an intern's readiness to teach, the intern is assigned a co-teacher for the first few weeks. If after a month the intern is not deemed capable of teaching on his or her own, the intern is dropped from the program. Once interns begin teaching, they attend classes in a cohort from 4:00 to 8:30 twice a week for the duration of the program. After 18 months in the program, interns are required to take and pass Teaching Performance Assessments (TPAs) in order to be recommended for a preliminary credential. The program has also integrated the induction requirements for new teachers into its program, so that interns can earn a clear credential in 3 years.

The LA District Intern Program is just beginning to make these changes, and the implementation challenges are likely to be significant. Still, this alternative-route program, like others across the country, is modifying itself to better prepare new teachers. The program must still follow state credentialing requirements and has not been able to reduce the burden by creating tailored programs determined by individual competency, but it is pioneering the use of Teaching Performance Assessments. Other intern programs, particularly university-based programs, would be wise to examine the innovative steps taken by the LA District Intern Program.

Conclusion

As the state scrambles to adhere to NCLB requirements, there will need to be a continued focus on producing an adequate supply of teachers who meet the definition of "highly qualified." As we have discussed above, progress has been made in this area: credential production is up, and intern programs are enrolling more working teachers than ever before. However, this progress could be threatened by budget cuts that lead to caps in university and intern program enrollments. And any progress in the production of general education credentials needs to be matched, if not exceeded, by comparable gains in the production of special education credentials. At this point, the state is far from realizing this goal.

While the state struggles to maintain adequate numbers of new teachers, policy-makers must not lose sight of the quality of their preparation. In today's high-stakes environment, it is critical that all students have a well-prepared teacher. As we have seen in this chapter, the challenges facing teacher preparation programs are to bring consistently high-quality teacher experiences to candidates, in areas ranging from coursework to student teaching. In particular, programs need to strengthen those areas that candidates perceive as less useful, especially in areas of adapting instruction for special education students and meeting the needs of diverse learners, including English language learners, in their schools. Another challenge for the state is to strengthen the quality of the intern experience. This is a popular route that appears to be here to stay, at least for the foreseeable future, but needs to be better adapted to the demands of working teachers and needs a stronger student teaching component. Still another challenge at the district level is to adequately support all alternative-route teachers as they progress toward earning a credential, regardless of whether they participate in a formal program or not.

To address these challenges, California's policy-makers must begin by rejecting the assumption that new teachers must struggle and must provide mechanisms to see to it that they do not. Implementing the competency-based TPAs may be a good start. Working to reform the current structure of the intern programs is another good direction, and local models that are trying to do so deserve the attention of state policy-makers. And at all levels—state, institution of higher education, and district—we need to continue to invest in strengthening teacher preparation in the traditional and alternative routes alike. But that is not all: new teachers still need to work in schools with adequate resources, supportive environments, and good working conditions. They need to receive high-quality induction and career-long professional development. We turn to these issues in the next chapters.

4. Induction

Policy Update

- California continues to invest heavily in induction for beginning teachers.
- Induction has been institutionalized as a part of the "learning to teach" continuum as a result of SB 2042, legislation that established induction programs as part of the path to the professional clear credential.
- The transition from Beginning Teacher Support and Assessment (BTSA) programs to 2042-approved induction programs is on track for completion by early 2004.

BTSA Participation

- The proportion of beginning teachers participating in the state-supported Beginning Teacher Support and Assessment program has continued to increase.
- In 2002-03, 42% of first- and second-year teachers did not have either a preliminary or professional clear credential and so were not eligible for BTSA. These underprepared teachers are disproportionately concentrated in schools serving poor, minority, and low-performing students.
- Teachers with years of teaching experience on emergency permits and/or as pre-interns or interns reported that by the time they were eligible for BTSA as fully credentialed teachers, it no longer met their professional needs.

Nature and Impact of Induction Support

- Almost all teachers (96%) receive some form of induction support in their first years on the job. Nearly three-quarters of new teachers reported being assigned a mentor, being observed by nonadministrators, and receiving release time to observe other colleagues.
- Of the new teachers who were assigned a mentor, many reported infrequent mentor support. The types of mentor support new teachers most often reported as very valuable were: consulting on the needs of students, talking with mentors about classroom observations, and having mentors demonstrate lessons. However, new teachers' feelings about the value of mentor support varied by the frequency with which they interacted with their mentors.
- Teachers who participated in BTSA were more likely than nonparticipants to report receiving most types of mentor support.
- Even in districts with strong formal induction programs, support for underprepared teachers was often inadequate.
- There is a shortage of experienced teachers to serve as mentors for induction programs, particularly in schools serving poor, minority, and low-performing students.
- The impact of BTSA on teacher retention is impossible to measure because there is no statewide database tracking information on teachers' employment status.
- In general, teachers reported that their induction experience contributed modestly to their professional growth.

In the previous chapters, we have described the difficulties district and school administrators face in attracting qualified teachers and the limits of new teachers' preparation to take on the challenges of the classroom. Here we turn to what can be done to support new teachers. Numerous research studies have documented the importance of support networks and opportunities for professional growth in the early years of teachers' careers. Such supports are key to improving new teachers' skills, knowledge, and retention.[1] In a profession in which individuals typically work in isolation, new teachers face numerous challenges in managing a classroom and organizing instruction in what easily can become a "sink or swim" environment. Teachers' experiences during these beginning years influence whether they will remain in the profession and, if they do, what kinds of teachers they become.

To build and retain a high-quality teaching force and ensure that teachers have the skills and knowledge to prepare a diverse student body to meet tough content standards, California has invested heavily in induction support for beginning teachers. But, because of the surge in teachers who enter the profession through "nontraditional" routes, there are multiple means of supporting teachers who take different routes into the profession. For beginning teachers who have completed a preparation program and have a preliminary or professional clear credential, the state funds a formal induction program, Beginning Teacher Support and Assessment (BTSA). The state's pre-intern and intern programs, although not typically referred to as induction programs, also work with teachers in their first years in the profession, simultaneously preparing them as teachers and supporting them to become better teachers. Because beginning teachers in California are in various stages of completing their preparation and credentialing programs, the support they receive during their initial years varies considerably. Further, despite the state support, there is substantial variation in the implementation of BTSA programs at the local level. As the state moves toward a two-tiered credentialing system that culminates in induction, these challenges may become more profound.

In this chapter, we review state policies related to induction. We then describe the nature and intensity of induction support, the variation in local capacity to provide high-quality induction support for all new teachers, and the impact of induction on the skills, knowledge, and retention of beginning teachers. We conclude by identifying workplace conditions that affect the impact of induction programs.

Policy Update

Since the early 1990s, California has supported a formal induction program, the Beginning Teacher Support and Assessment program, to serve primarily first- and second-year teachers who hold preliminary and professional clear credentials. In 1998,

[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).

the state moved to institutionalize induction support for all new teachers by making induction a key component of California's credentialing system. The origins of BTSA and its more recent institutionalization through Senate Bill 2042 are discussed here.

Beginning Teacher Support and Assessment (BTSA)

After a 4-year pilot project, legislation passed in 1992 (SB 1422) supported the statewide development of BTSA. In 1997, AB 1266 established clear guidelines for local BTSA programs, including the development and use of a formative assessment of beginning teacher performance aligned with the California Standards for the Teaching Profession (CSTP). The BTSA Interagency Task Force, which consists of members of the California Commission on Teacher Credentialing (CTC) and the California Department of Education (CDE), subsequently developed the California Formative Assessment and Support System for Teachers (CFASST), which is used by all but a handful of local BTSA programs. In addition to formative assessments of teacher practice, BTSA also provides beginning teachers with individualized induction support from experienced teachers and with professional development workshops and seminars on classroom management and instruction.

Senate Bill 2042

State support for beginning teacher induction was effectively institutionalized with the passage of SB 2042 in 1998. This legislation restructured the state credentialing system into a two-tiered process and established the completion of an induction program as the "preferred" path toward the professional clear credential (CTC, 2003f). By raising standards for the preparation of new teachers and providing for induction support, SB 2042 is supposed to help new teachers succeed in the classroom. Under SB 2042, teacher preparation is considered to include the courses and assessments teachers must take to earn a preliminary credential. Induction then takes place during the first 2 years of teaching, when teachers participate in professional development activities that build on teacher preparation coursework. Teachers also go through the formative assessment process under the guidance of an experienced teacher, leading to the professional clear credential. Under SB 2042, each employing district is responsible for ensuring induction support for beginning teachers and recommending teachers for the professional clear credential.

In response to the 2042 legislation, the CTC adopted the *Standards of Quality and Effectiveness for Professional Teacher Induction Program*s in March 2002. New and existing induction programs, including BTSA programs, were to submit plans describing how the local induction program intends to meet these new induction standards. Each program was to include either the state-provided assessment system, CFASST, which is aligned with the California Standards for the Teaching Profession, or a locally developed assessment process. As of November 2003, all 149 BTSA programs had applied for approval under 2042 standards (CDE, 2003q). Sixty-five of these programs had been approved, and 16 had been recommended for approval. The expectation is that all programs will be approved under the 2042 standards by early 2004.

Once all existing BTSA programs are approved under the 2042 standards, teachers will have two options to obtain a professional clear credential: (1) complete a local 2042 induction program[2] or (2) complete a "fifth year of study," including advanced coursework in health education, special education, computer technology, and, after July 1, 2005, teaching English language learners (CTC, 2003f). Because 2042-approved induction programs are state subsidized, it is expected that most eligible new teachers will choose the induction program over the fifth year of study, the costs of which must be paid for by the teacher candidate. However, the CTC will continue to keep the option for coursework in place as long as there are teachers who do not have access to a 2042-approved induction program (CDE, 2003n).

BTSA Funding and Participation

In 1992, BTSA was allocated $4.9 million to serve an estimated 1,100 teachers. Since then, BTSA has grown into 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. Despite large cuts to many areas of the state's education budget in the 2003-2004 fiscal year, BTSA funding remained relatively steady, with just a slight decrease from $88.1 million in 2002-03 to $86 million in 2003-04, a clear indication of the priority California policy-makers place on supporting new teachers.[3] In 2002-03, there were 145 BTSA programs serving more than 21,000 beginning teachers, with a projected increase of 2,000 beginning teachers in 2003-04 (Table 4-1). Nearly all districts (88%) in the state participate in BTSA; those that do not are primarily small, rural districts that do not regularly hire beginning teachers (Clark, Hickey, & Sacramento, 2003).

[2] Unlike BTSA programs, 2042-approved induction programs incorporate the requirements for advanced coursework in health education, special education, computer technology, and English language instruction.

[3] The budget for 2003-04 allocates $3,443 per eligible teacher. Since BTSA requires $2,000 in matching or in-kind funds from districts for each participating teacher, total funding per teacher currently stands at $5,334.

Table 4-1
BTSA Funding and Participant History, 1992-93 to 2003-04

Year	Funding (millions)	Number of programs	Estimated number of new teachers supported
1992-93	$4.9	15	1,100
1993-94	$5.0	30	2,300
1994-95	$5.2	30	1,900
1995-96	$5.5	30	1,900
1996-97	$7.5	34	2,166
1997-98	$17.5	73	4,118
1998-99	$66.0	86	12,330
1999-2000	$72.0	133	22,156
2000-01	$87.4	146	24,186
2001-02	$84.6	145	22,253
2002-03	$88.1	145	21,095
2003-04	$86.0	149	23,000 (projected)

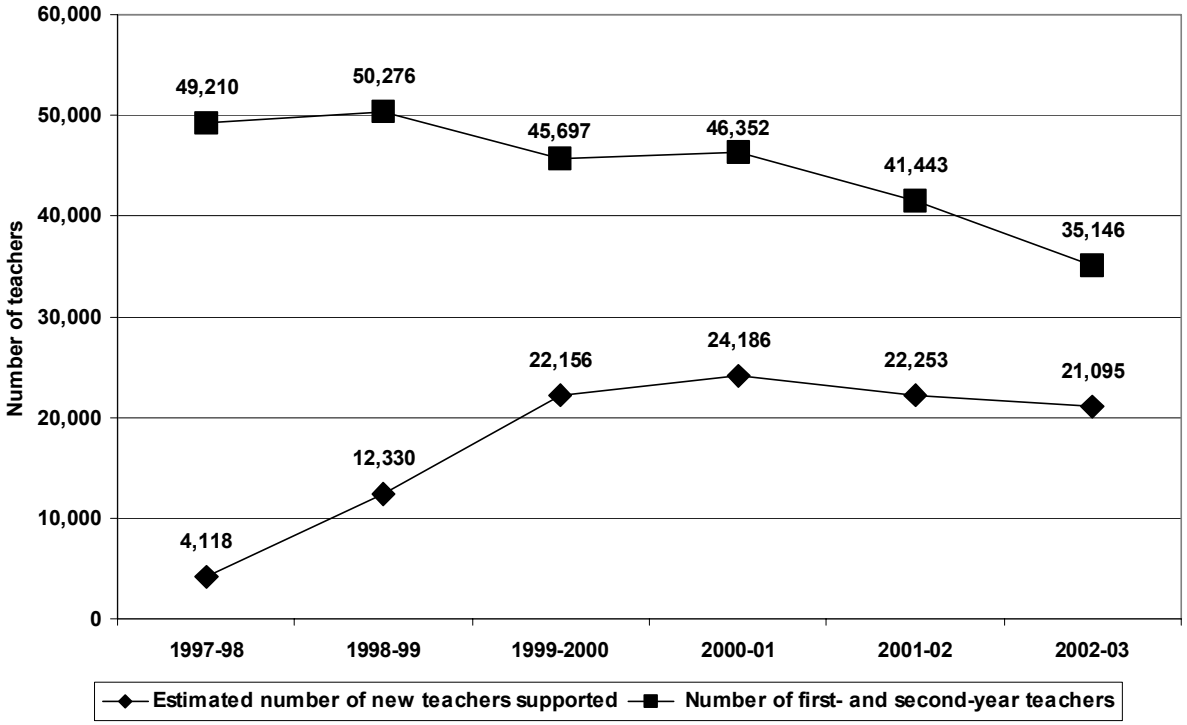
Sources: Bartell & Ownby (1994); CTC (1998b); CTC (2001c); CDE (2003n); Hickey (2003); Mitchell & Boyns (2002).

Given that BTSA is considered fully funded (i.e., funding is sufficient to serve all eligible new teachers), it is informative to examine the makeup of the 21,000 teachers who participated in the program in 2002-03. The overall number of first- and second-year teachers—BTSA's target population—decreased from approximately 46,000 in 2000-01 to about 35,000 in 2002-03. As a result, the number of teachers served by BTSA now reflects a greater proportion of beginning teachers than ever before. For example, in 2000-01, BTSA served about 24,000 teachers, fewer than half of the total number of first- and second-year teachers that year (Figure 4-1). Two years later, the number of teachers served by BTSA reflected closer to 60% of all new teachers in the state. Although the difference between the total number of new teachers and the number of teachers served through BTSA has narrowed, a gap continues to exist. This gap probably reflects the underprepared teachers in their first and second years, who are ineligible for BTSA.[4]

[4] New teachers with emergency permits and pre-intern certificates are not eligible for BTSA. The eligibility of interns for BTSA is more complicated. The language of SB 2042 [Education Code Section 44279.1(d)] defines eligible beginning teachers as "a teacher with a valid California credential…or an intern…who is serving in the first or second year of service." However, eligibility information available on the BTSA Web site (www.btsa.ca.gov) states that interns cannot be funded in two programs (intern and BTSA) for the same year, but may begin induction services during the transition between internship and receipt of a preliminary credential. In effect, this means that the CTC can issue a preliminary credential to an intern after one and a half years in the program so that the intern can participate in BTSA for the next one and a half years. This allows for 3-year intern/induction programs that culminate in a professional clear credential.

Further, it is important to keep in mind that not all teachers served by BTSA are in their first or second year.[5]

Figure 4-1
Number of First- and Second-Year Teachers and Estimated Number of New Teachers Supported by BTSA, 1997-98 to 2002-03



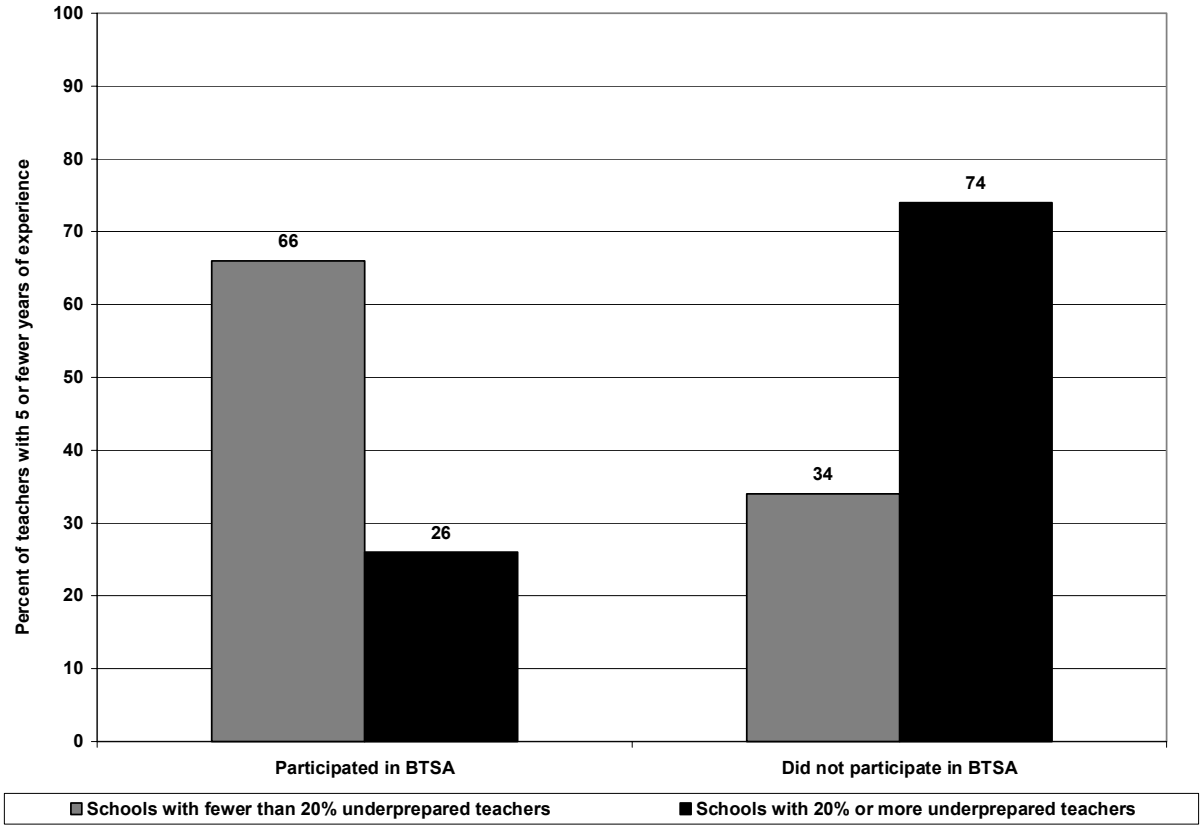
Sources: CDE (1998b, 1999b, 2000b, 2001b, 2002b, 2003b, 2003n); Mitchell & Boyns (2002).

Note: The number of first- and second- year teachers includes fully credentialed and underprepared teachers.

To fully understand BTSA participation, it is also instructive to identify who is *not* participating in the program. Although the number of underprepared teachers entering the profession is decreasing, in 2002-03, 42% of first- and second-year teachers did not have either a preliminary or professional clear credential and so were not eligible for BTSA (CDE, 2003b). Consequently, in schools with 20% or more underprepared teachers, 26% of teachers reported participating in BTSA, compared with 66% of teachers in schools with few underprepared teachers (see Figure 4-2).

[5] BTSA supports primarily first- and second-year teachers with full credentials but also serves some teachers with out-of-state credentials. Prior to the passage of SB 2042 in 1998, BTSA was also made available to limited numbers of underprepared teachers in their first and second years of teaching at the discretion of local programs (see Tushnet et al. 2002, p. 111).

Figure 4-2
BTSA Participation, by Percentage of Underprepared Teachers in a School

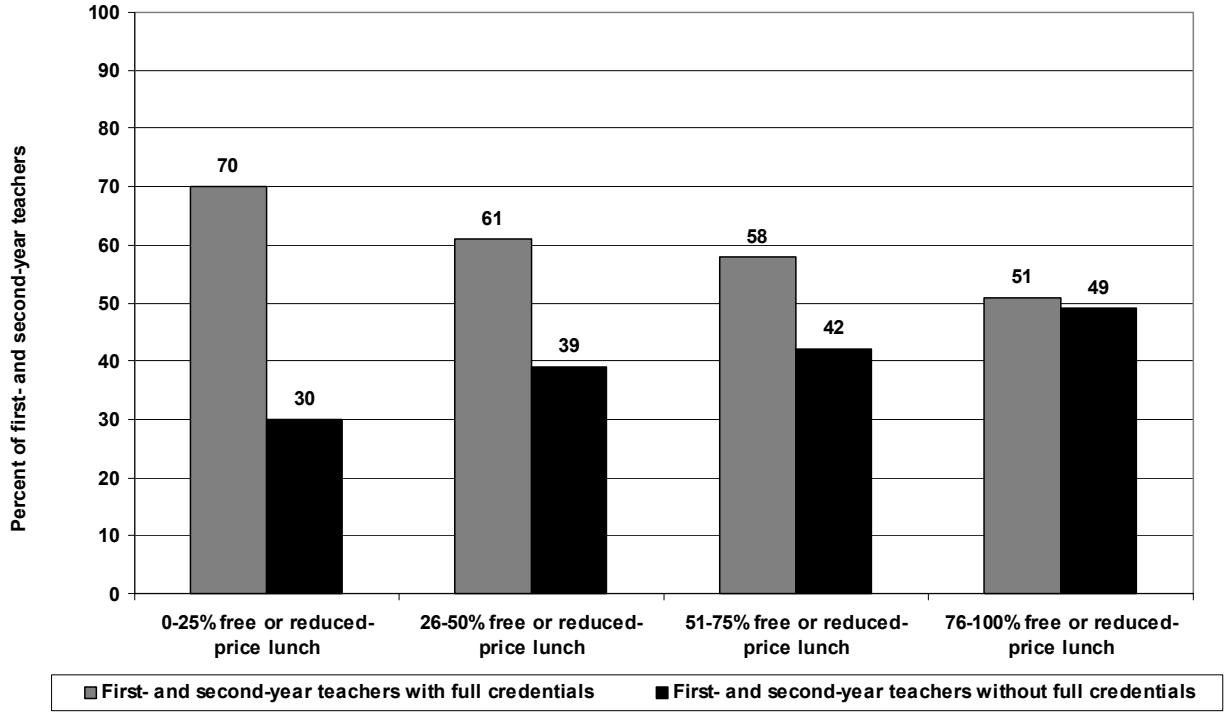


Source: SRI Survey of California Teachers (2003).

Note: See Appendix B for statistical information.

As previously discussed, these underprepared teachers are disproportionately concentrated in schools serving poor, minority, and low-performing students. In 2002-03, approximately 50% of first- and second-year teachers in high-poverty schools were underprepared, compared with 30% of first- and second-year teachers in low-poverty schools (Figure 4-3). Although the total proportion of new teachers supported through BTSA appears to have increased over the years, new teachers in the state's highest-poverty schools are less likely to be eligible for BTSA than new teachers in lower-poverty schools. Consequently, although they have some of the most challenging teaching assignments, underprepared teachers in the state's highest-poverty schools often lack a structured support system during their early years in the teaching profession.

Figure 4-3
Distribution of Prepared and Underprepared New Teachers, by School Poverty Level, 2002-03



Sources: CDE (2003b, 2003d, 2003g); SRI analysis.

Likewise, special education teachers are less likely to be eligible for BTSA, primarily because special education teachers are less likely to be certified than general education teachers. Sixty-two percent of first- and second-year special education teachers, compared with 42% of all first- and second-year teachers, were underprepared and thus were not eligible to participate in BTSA (CDE, 2003b). Special education teachers have among the most difficult assignments and often teach in isolation. If lacking full credentials and therefore ineligible for BTSA, these teachers may receive little or no support in their first years.

Underprepared teachers become eligible for the BTSA program only after they have earned their credential. Ironically, although teachers may have years of teaching experience prior to earning their credential, the BTSA program treats them as beginning teachers. Consequently, there is a mismatch between the support underprepared teachers need and the time that they are eligible to receive that support. This mismatch may affect even more teachers once 2042-approved induction programs are in place as the preferred path to the professional clear credential for all teachers, regardless of their previous teaching experience. Many underprepared teachers who eventually earn their preliminary credential are reluctant to participate in a program for beginning teachers because they feel the support is no longer appropriate for their professional needs. The following example illustrates this fundamental tension.

Once Eligible for BTSA, the Lessons No Longer Apply

Leo earned his credential through an intern program. Upon completion of the intern program, Leo was finally eligible to participate in BTSA. After attending the first BTSA meeting of the year, he remarked, "They said it was voluntary; if we wanted to continue to do this, we could. And basically it sounded like I was going to have a mentor and I was going to have all these tasks to do, and, in my mind, it was like I just finished my program, and I don't want to have tasks to do. I don't want to have all these extra meetings with these people. I just finished doing that, and I would like to focus on my class. And so I didn't go back…I couldn't understand why anyone would do this unless they were a first-year teacher and needed the extra support." For Leo, BTSA was seen as redundant and unnecessary after he had spent 2 years in an intern program with structured mentor support.

As intern programs become an institutionalized solution to teacher shortages, particularly in the wake of No Child Left Behind, and induction programs become the preferred path toward the professional clear credential, the lack of articulation between intern and induction programs is likely to become an increasingly significant problem. As of November 2003, one intern program, the LA District Intern Program referred to in the preceding chapter, had applied to be a 2042-approved induction program. This is the only effort we are aware of that seeks to provide a seamless transition from the intern program to a 2042-approved induction program. The program combines preparation and induction for interns into a 3-year sequence aligned with the state's teaching standards. If approved, the program has the potential to serve as a model for other intern programs in the state that are trying to meet the multiple needs of individuals who earn their credential while teaching.

Thus far, we have presented information about BTSA participation rates and the implications of BTSA eligibility requirements for induction. In the next section, we examine the substance of induction support overall and describe the types of support received by teachers participating in BTSA and those not participating in BTSA.

Induction Implementation and Impact

Nearly all new teachers in California—both those with credentials and those who are underprepared—receive some type of induction support. Sometimes this support comes through formal programs, such as BTSA; in other cases, it comes via informal means. In our statewide survey of teachers, 96% of teachers with 5 or fewer years of experience reported receiving some form of induction support during their first and second years on the job.[6] Of those teachers receiving induction support, just over half (51%) reported participating in BTSA. An additional 17% reported receiving formal induction from a program other than BTSA (many of these individuals may have participated in a BTSA-sponsored program but did not know it as such). Almost one-third of teachers, however, indicated that they did not participate in any formal induction program; their induction was informal.

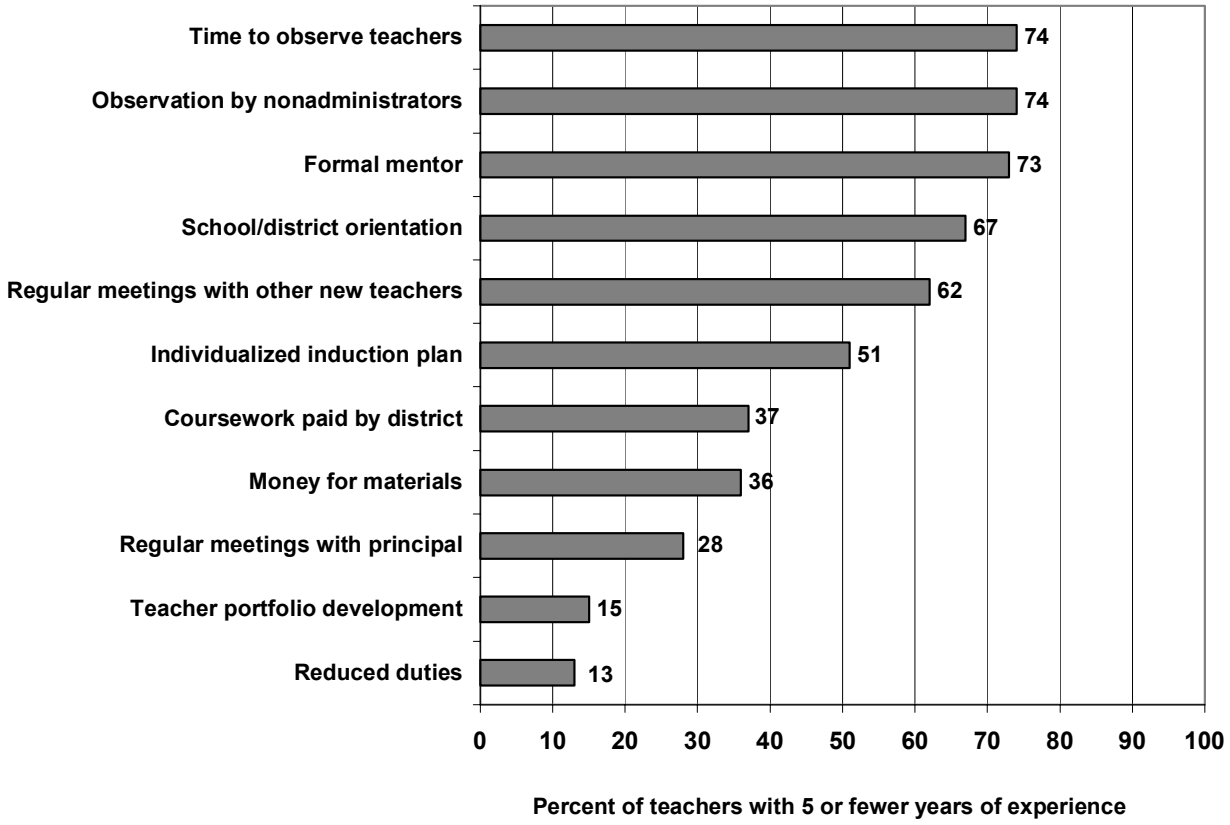
[6] Unless otherwise specified, in this chapter we report only the survey responses of the subsample of teachers with 5 or fewer years of teaching experience.

Nature of Induction Support

Induction serves to integrate new teachers into the professional community and life of a school and supports a smooth transition into the profession. If new teachers are to be retained in the profession and become more effective educators, they need support and guidance from colleagues and administrators around their teaching practice. Induction can provide this support in many ways, including providing opportunities for new teachers to collaborate and interact with colleagues around classroom management and instructional issues, providing occasions to observe the classroom practices of experienced teachers and learn best practices, and offering opportunities for feedback on their own practice.

Teachers in California, regardless of whether or not they participated in BTSA, reported receiving a broad range of induction-related support. The most prevalent forms of induction support, received by nearly three-quarters of new teachers, were formal assignment of a mentor, being observed by nonadministrators, and receiving release time to observe other teachers (see Figure 4-4).

Figure 4-4
Induction Support Activities Provided to Beginning Teachers



Source: SRI Survey of California Teachers (2003).

Note: See Appendix B for statistical information.

More than three in five new teachers reported regularly meeting with other new teachers, an important induction component that can help to build a network of professional and personal support. As one second-year teacher reported, "We started BTSA right away, and that was helpful—to have [other] new teachers to talk to."

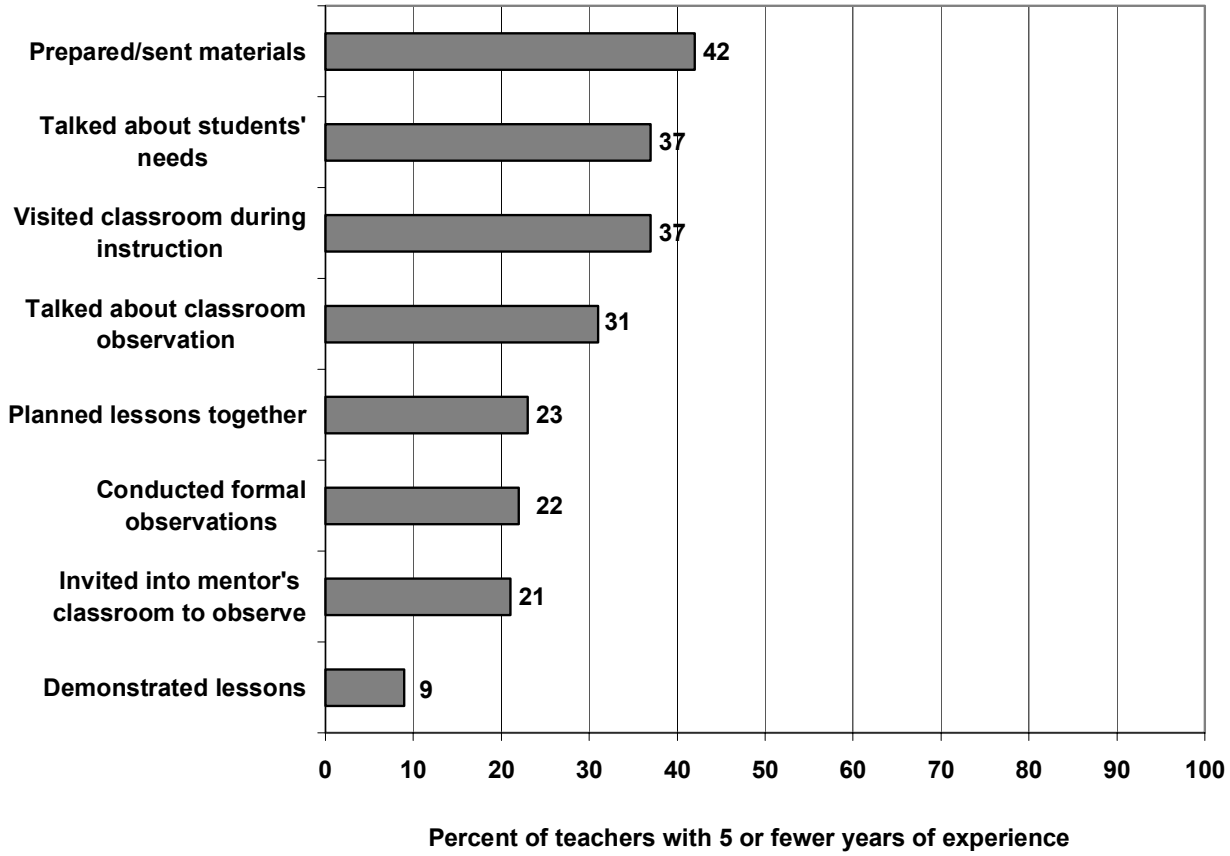
Fewer than 3 in 10 new teachers reported meeting with their principals regularly. Most case study teachers said that contact with their principals and other administrators typically was limited to performance evaluations. The teachers who did meet with their principals more regularly, though, reported positive outcomes. One first-year teacher said the support she received from her principal was invaluable. "If there's a problem or any question, I wouldn't hesitate to go to [the principal]," she said. "Before school started, I sat down with her a lot…[and] in the beginning of the school year, she was in here a lot. She'd come in and read stories to my class. She would observe me casually and give me feedback."

To relieve the stress often experienced by new teachers, some schools and districts reduce duties for new teachers, allowing teachers to focus their energies on lesson planning, instructional issues, and classroom time. This type of induction support is rare, however; only 13% of teachers reported having their duties reduced. In fact, as is discussed later in this chapter, many new teachers take on responsibilities beyond teaching in their first years.

In the next section, we examine mentorship in depth because of the key role it plays in induction support.

Mentor Support for New Teachers. A central component of support for new teachers—fully prepared teachers, interns, and pre-interns alike—is mentoring. Nearly three-fourths of teachers reported being formally assigned a mentor. However, the frequency and focus of the mentoring were uneven. Of the new teachers who were assigned a mentor, fewer than half reported receiving any one type of mentor support on a monthly or weekly basis (Figure 4-5). In addition, teachers were more likely to receive superficial support (e.g., their mentor prepared or sent materials) than support that might help improve their skills and knowledge of instructional techniques and classroom management, such as observing their mentor or having their mentor demonstrate a lesson.

Figure 4-5
Teachers Reporting Monthly/Weekly Mentor Activities

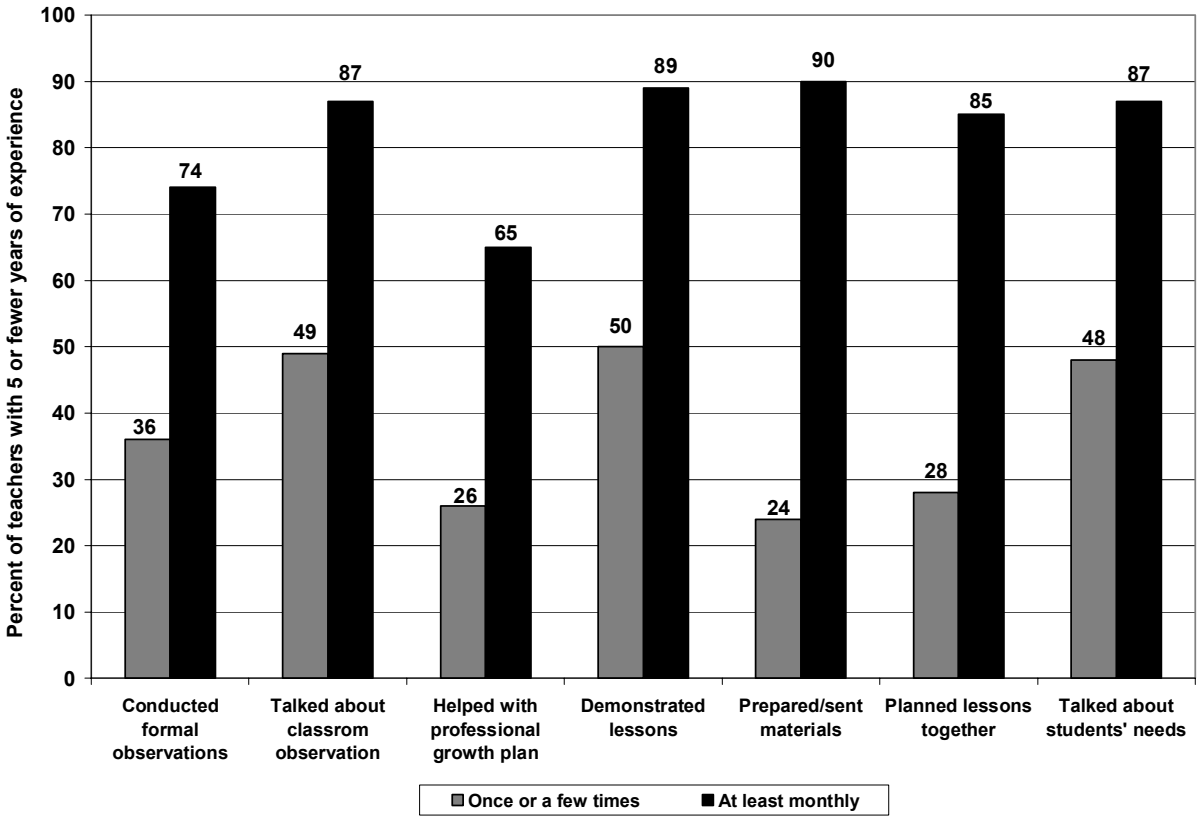


Source: SRI Survey of California Teachers (2003).

Note: See Appendix B for statistical information.

The types of mentor support most often reported by new teachers as being very valuable were talking with mentors about the needs of students (67%), talking with mentors about classroom observations (63%), having mentors demonstrate lessons (57%), and having mentors visit their class during instruction time (56%). However, new teachers' feelings about the value of the mentor support varied by the frequency of the support. Those teachers who received support on a weekly or monthly basis were more likely to describe that support as "very valuable" than teachers who reported receiving support only once or a few times (Figure 4-6).

Figure 4-6
Teachers Reporting Mentor Support Activities as Very Valuable, by Frequency of Activity



Source: SRI Survey of California Teachers (2003).

Note: See Appendix B for statistical information.

Because new teachers' ratings of their induction experiences were based largely on the quantity and quality of mentor support they received, BTSA participants who saw their mentors infrequently or did not receive useful feedback had negative reactions to the BTSA program as a whole. Without the benefit of consistent mentor support, these teachers were left frustrated by burdensome paperwork and by the amount of time they had to spend on the program. The following case is an illustration.

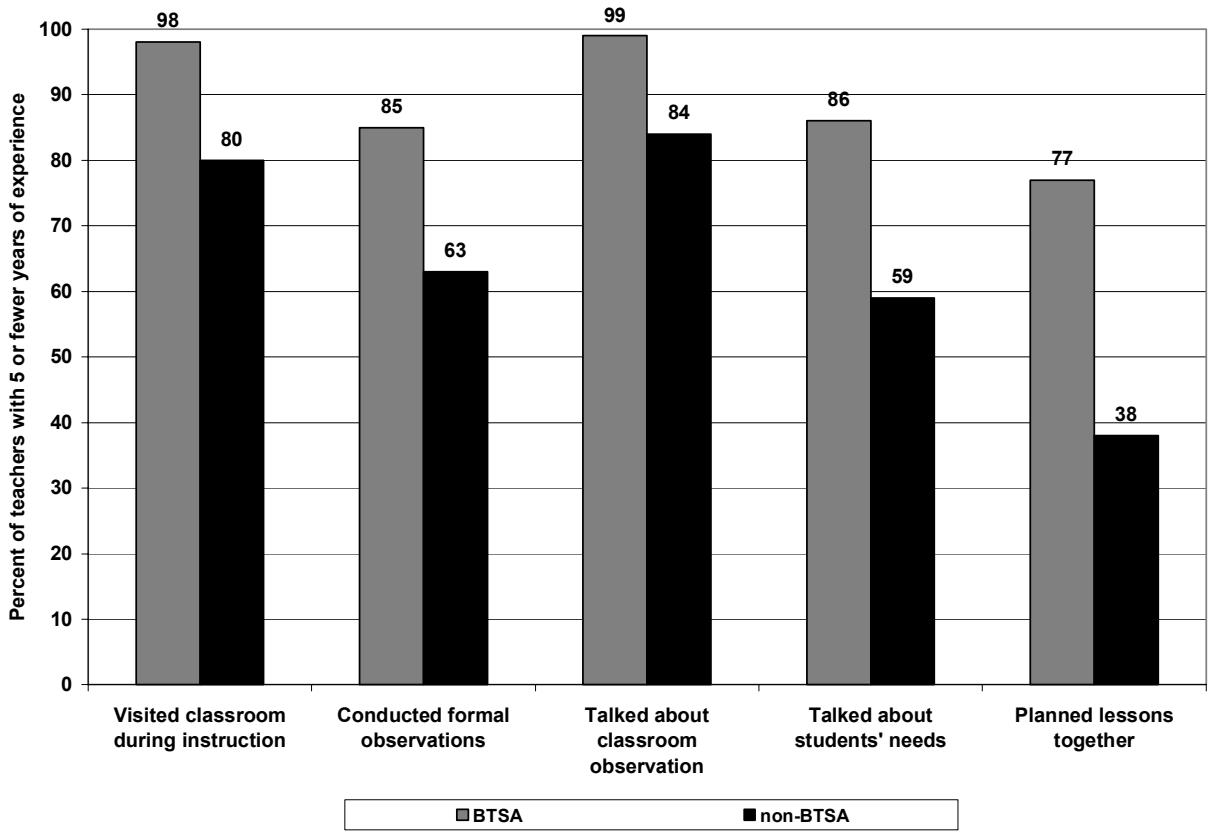
Insufficient Mentor Support Leads to Stress and Frustration

John, a first-year teacher with a clear credential, reported minimal support from his BTSA support provider. John was observed only three or four times during the year, and the support provider provided feedback on classroom management, which John wanted, but not on instructional practice, which he also needed. As a result, he felt that BTSA seemed like extra work rather than a series of helpful activities, and complained about the amount of paperwork. He said, "Being a first-year teacher, it is so hard to…deal with your first-year teacher stuff…I'm so busy anyways,…so I don't feel like there's a lot of time…I know that BTSA is probably doing good for me, but it's just that extra thing that I have to do." He added at the end of the year, "BTSA wasn't helpful at all. The paperwork was ridiculous. I don't think new teachers should have to go through that…It would have been better if it had been less formal…it just added more stress."

In short, the nature and intensity of mentoring support play a strong role in the perceived effectiveness of mentoring and how teachers rate their induction experience overall. Next we examine how mentoring support differs between BTSA and non-BTSA teachers.

Mentor Support for BTSA and Non-BTSA Participants. In general, teachers who participated in BTSA received more mentor assistance than nonparticipants (Figure 4-7). For instance, 85% of new teachers in BTSA reported that their mentor formally observed their classroom at least once, compared with 63% of non-BTSA participants; 77% of BTSA participants reported planning a lesson with their mentor at least once, compared with 38% of non-BTSA participants.

Figure 4-7
Teachers Reporting They Received Various Types of Mentor Support at Least Once, by BTSA Participation



Source: SRI Survey of California Teachers (2003).

Note: See Appendix B for statistical information.

Differences between mentor support of BTSA participants and nonparticipants were apparent in our case study sites. Among our case study teachers, underprepared teachers (i.e., those not participating in BTSA) spent less time with their mentors than did BTSA participants. For instance, in a semi-urban district, site coaches for pre-interns and interns met with their teachers only two to three times throughout the year, whereas BTSA support providers met weekly with their newly credentialed teachers. Furthermore, mentor support for pre-interns and interns was often limited to guidance on paperwork, rules, and procedures. A site coach for pre-interns and interns remarked that her role was "just being an ear if they need it." She reported that she held a couple of meetings at the beginning of the school year "to get them started [and] show them what kinds of forms they could look for, who to ask for whatever they needed." In another district, mentor support for underprepared teachers was similarly weak. Despite the district's strong BTSA program for credentialed new teachers, teachers with emergency permits did not receive any formal mentor support, while pre-interns and interns were assigned a mentor who provided assistance solely with school and district policies and procedures, not instructional practice. In addition,

mentors for the interns and pre-interns continued to hold full-time teaching positions, thus limiting their availability. In contrast, the district's BTSA support providers were released from all teaching responsibilities. As the vignettes below illustrate, even teachers in the same school had vastly different mentor experiences based on whether or not they were eligible to participate in BTSA.

BTSA Participants Receive More Consistent Mentor Support Than Nonparticipants

Katerina, a credentialed second-year math teacher in a suburban high school, thought BTSA was extremely helpful. She met with her support provider once a week. "I've learned more classroom management with BTSA than in my [teacher preparation] program." Katerina's support provider gave her supplemental materials, ideas for approaching activities or content instruction, ways to analyze student work to guide instruction, and suggestions on tightening up time management—"everything you can think of." Katerina felt the support was especially helpful because it was integrated with subject matter content instruction. She felt her support provider was effective because she was an experienced teacher familiar with the struggles of new teachers, the math content, student needs, and instructional strategies.

Alicia, a second-year intern, taught science at this same suburban high school. Although she was not eligible for BTSA, she was assigned a mentor through the county's pre-intern/intern program. Unlike Katerina, she rarely saw her mentor, who taught at a different high school in the district. Further, she received no support around instructional planning and classroom management, two issues she identified as challenges during her first 2 years. "Occasionally I'll get this call from this woman who is supposed to be my support provider," she described. "I always get the feeling she's neglected to do some paperwork I was supposed to turn in. I'll hear from her once a month or every month and a half. Every once in a while, she'd pop up here, but it was scattered. Like she'll make these meetings with me, and she won't show up." In the absence of consistent mentor support, Alicia relied on informal support from her colleagues to make it through her first 2 years.

The discrepancy in support provided to BTSA participants and nonparticipants is particularly important in light of the fact that the teachers of the state's poorest, lowest-performing students are more likely to be underprepared, and thus less likely to participate in BTSA.

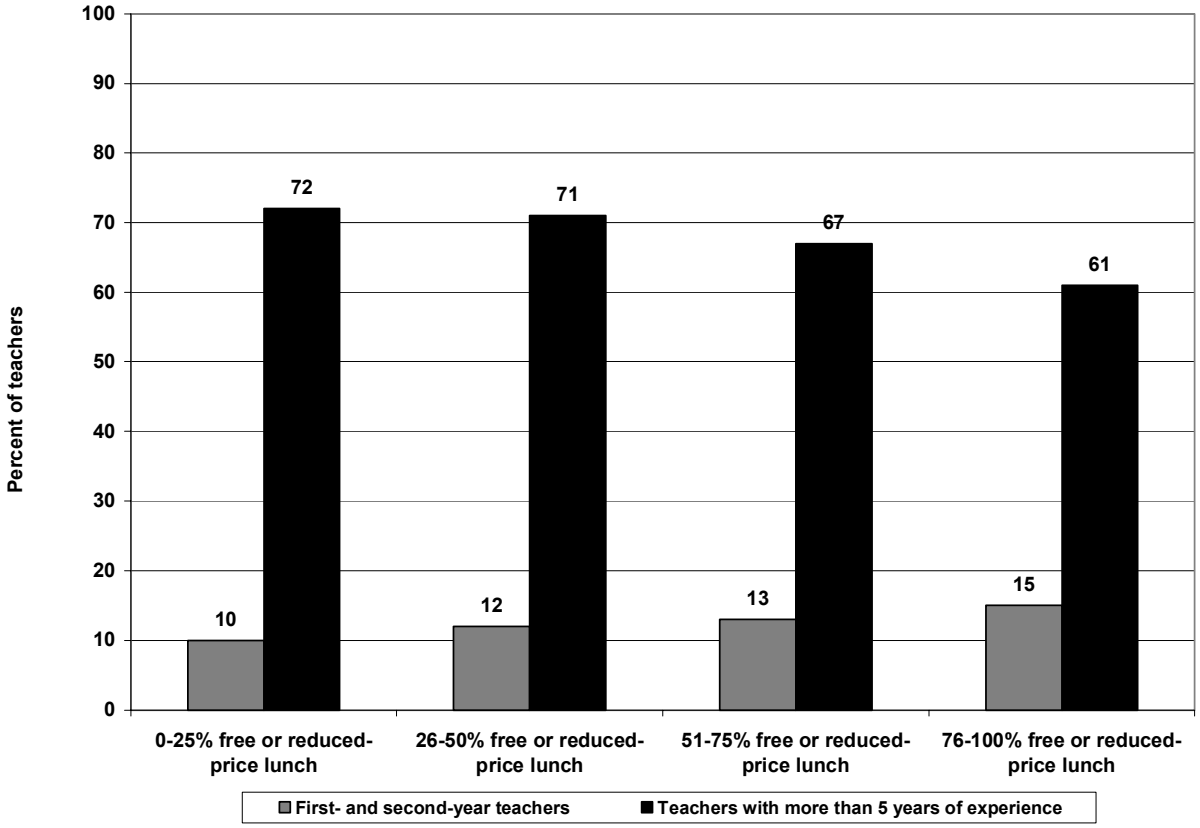
The specific induction program (i.e., BTSA versus other induction programs) clearly has an impact on the mentor support provided to new teachers. So, too, does the capacity of the districts and schools to provide high-quality mentoring affect new teachers' support. We turn to this issue next.

Capacity to Provide High-Quality Mentor Support

Schools and districts vary in their capacity to provide high-quality mentor support. A key indicator of local capacity is the presence of a sufficient number of experienced teachers to serve as support providers. Districts with large numbers of experienced, accomplished teachers have a sufficient pool from which to draw BTSA support providers, as well as mentors and coaches for underprepared teachers. In these districts, the selection processes for support providers can be more rigorous and mentors can be more closely matched with new teachers, each of which can affect the nature, intensity, and quality of support.

Experienced teachers are distributed unevenly across California schools. There are fewer experienced teachers in schools serving poor, minority, and low-performing students. In the state's highest-poverty schools, the ratio of experienced to new teachers is 4:1, compared with a ratio of 7:1 in low-poverty schools (Figure 4-8). In the short term, as a result of fewer new teachers being hired, the ratios of experienced to new teachers have improved. However, the shortage of mentors in certain districts threatens the promise of high-quality induction support for all new teachers. Further, as retirement rates increase in the coming years and demand for new teachers subsequently increases, the ratios of potential mentors to new teachers may worsen.

Figure 4-8
Distribution of New and Experienced Teachers, by School Poverty Level, 2002-03



Sources: CDE (2003b, 2003d, 2003g); SRI analysis.

An inadequate supply of experienced teachers has implications beyond finding mentors to work with new teachers; it can also affect decisions about who can serve as a mentor. When there are few experienced teachers relative to new teachers in schools and districts, it is difficult for administrators to find people willing to take on the mentor role, much less be selective in whom they choose for this role. As a result, districts with shortages of experienced teachers sometimes resort to using fairly inexperienced teachers (e.g., those with fewer than 5 years experience) to serve as mentors. Further, they often accept any teachers who volunteer and meet minimum

criteria to mentor, regardless of demonstrated skill in the classroom. For example, BTSA support providers in a large, urban district interview with and are selected by the principal. The only requirement is that they have permanent status and 5 years teaching experience. In another suburban district with less turnover and a larger pool of experienced teachers, prospective BTSA support providers must file a formal application and attend an oral interview with the Peer Assistance and Review (PAR) Board (BTSA is partially funded through PAR in this district). The interview is then followed by a week of classroom observations by the members of the PAR Board.

Besides a limited supply of experienced teachers, other school conditions and program policies can affect the quality of mentorship. We describe some of these next.

Mentor Assignment and Match. Ideally, mentors and new teachers are matched by school site, as well as by grade level or subject area. However, even when the ratio of experienced teachers to new teachers is favorable, it can be a challenge to make appropriate matches. Districts face a fundamental dilemma in assigning mentors to new teachers: support providers at the same school site are able to meet more often with their beginning teachers but may not share the same subject or grade area. At the same time, support providers from different sites who are matched by subject or grade level can provide more substantive support around instructional areas, but they might not be able to meet as often or might be unfamiliar with the school context. This was the case in a rural high school that did not have enough support providers for its 15 BTSA participants and had to use teachers from other district campuses as support providers for its new teachers. The principal described this arrangement as a problem because the advice and support her new teachers received was sometimes inconsistent with the school's (and her own) philosophies of teaching and learning. In addition, the shortage of experienced teachers in certain departments, like special education, meant that special education teachers were still supported by general education teachers who did not have the expertise or experience to guide the new teachers. In this particular instance, the entire special education department had turned over in 3 years, and all the teachers were new and underprepared. In fact, the most senior teacher was an intern in his third year of teaching, leaving no experienced special education teachers to serve as mentors.

Professional Development for Support Providers. It is not enough for beginning teachers to be paired with mentors; mentors' skills and knowledge also matter. All BTSA support providers receive some training in the formative assessment process, the state's standards for the teaching profession, and coaching and observing. Local BTSA programs, however, determine the extent of the initial and ongoing training BTSA support providers receive. In one semi-urban district, for example, support providers receive 10 days of training over 2 years and attend regular meetings. In another district, the BTSA program supplements substantial initial training with half-day professional development seminars every other week. Other districts provide much less training to their support providers.

Incentives. Incentives can encourage experienced teachers to serve as mentors. All BTSA support providers are paid, but some feel that the pay is not enough. For

example, in a rural district, BTSA was not attracting the best teachers to serve as mentors because they felt that the pay was insufficient, given the amount of paperwork and the time they would have to invest in the program. Some districts solved this problem by releasing support providers from teaching responsibilities.

Release Time. Mentors need time to observe beginning teachers in the classroom and provide feedback and support. Districts in which support providers are released from their teaching duties are able to provide more regular support to new teachers. Those who are released full-time from classroom duties are able to devote all of their time and energy to new-teacher support. In one district, support providers are given a 3-year special assignment away from their teaching responsibilities. This is not the typical BTSA model, however; usually, full-time teachers serve as support providers. Because of the multiple demands on their time, these experienced teachers are unable to provide ongoing, intensive support to their new teachers. They are often unable to observe and provide feedback consistently.

Thus far, we have provided a picture of induction and how it varies throughout the state. In the following section, we look at the impact of these efforts on new teachers.

Impact of Induction Experiences

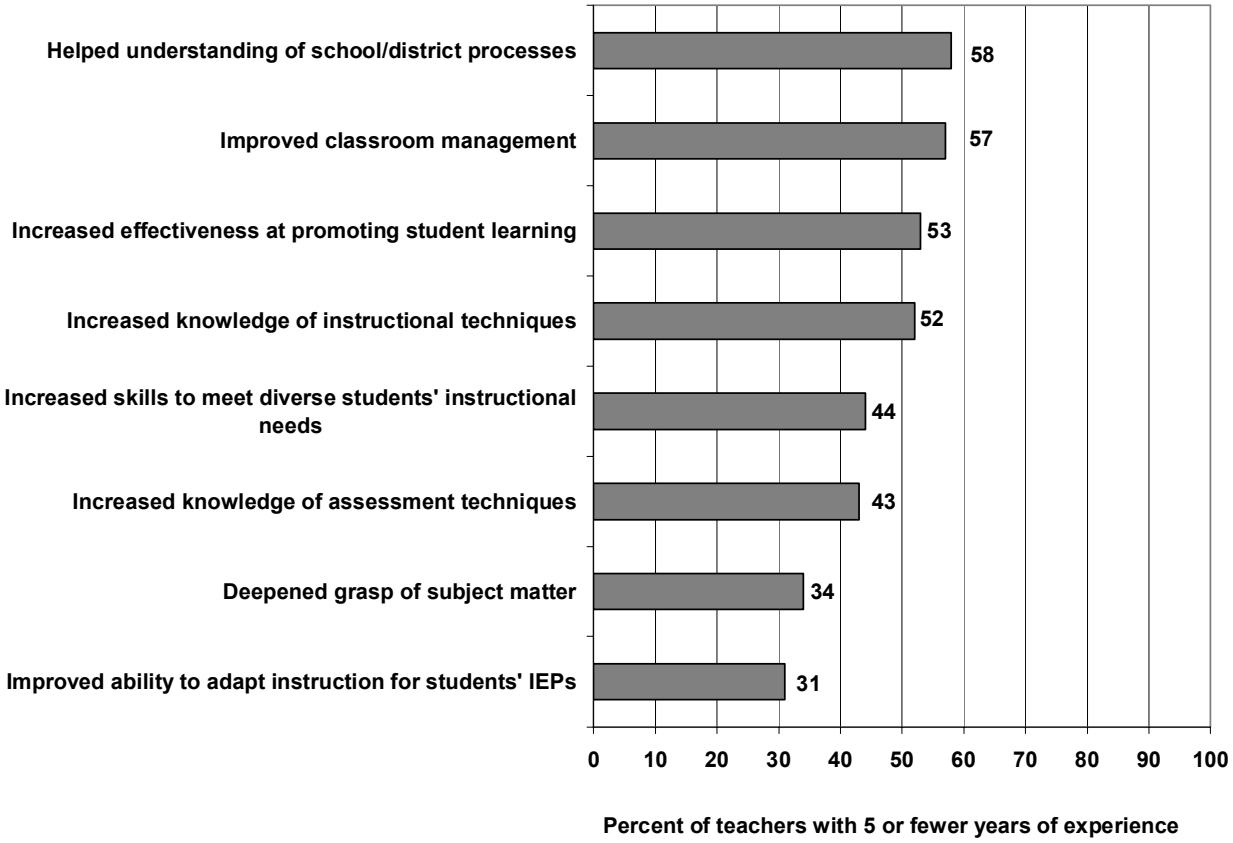
Teacher induction efforts in general, and BTSA in particular, serve two key purposes: to ensure that new teachers become effective professionals by improving their skills and knowledge, and to retain new teachers in the profession.

Although one stated purpose of BTSA is to retain beginning teachers in the profession, very few data to date confirm whether BTSA is having its intended effect. In a recent statewide evaluation of BTSA, the authors estimated a 93% retention rate for first-year teachers (Briggs et al., 2001). According to this analysis, most teachers who participated in BTSA in 2000-01 remained in their jobs during that year. Since the study did not include a matched comparison group, we do not know how that retention rate compares with the retention rate of beginning teachers who did not participate in BTSA. A more recent study on teacher retention in California, which matched teacher credential data with employment data, estimated a 94% retention rate for teachers after 1 year of teaching and an 84% retention rate after 4 years of teaching (CTC, 2002b). Although the study attempted to compare California's retention rate with the national teacher retention rate, the comparison was problematic because the authors compared data gathered through two different methods for two somewhat different groups over different time periods. The study also did not attempt to estimate the impact of BTSA participation on teacher retention. The primary hurdle to determining the impact of BTSA and other state policies on teacher retention is the lack of a statewide data system that is capable of tracking teacher attrition. Despite the millions of dollars that are now being poured into the BTSA program, there is no way to measure the effectiveness of BTSA with regard to retention on a statewide level. In the absence of state-level data, we must rely on uneven reports collected from local programs.

With regard to improving teachers' knowledge and skills, teachers report a modest impact overall, and few differences are apparent between BTSA and non-BTSA participants. According to our survey, just over half of teachers with 5 or fewer years of experience who received at least some form of induction support reported that it helped them understand their school and district processes, improved their classroom management, increased their effectiveness at promoting student learning, and increased their knowledge of instructional techniques (Figure 4-9). Fewer teachers reported that the support they received deepened their grasp of the subject matter they teach or helped them learn to adapt instruction for students with individualized education programs (IEPs).

There were no statistically significant differences between BTSA participants' and nonparticipants' perceptions of the effectiveness of their induction support, with two exceptions. Teachers who participated in BTSA were more likely than nonparticipants to report that induction increased their knowledge of assessment techniques (44% and 36%, respectively). Also, BTSA participants were more likely than nonparticipants to report that their induction experience increased their ability to adapt instruction for students with IEPs (32% and 25%, respectively). These differences may reflect BTSA's design around the California Standards for the Teaching Profession, which include an emphasis on student assessments and instruction for diverse learners. Given that there are proportionately fewer BTSA-eligible teachers in the state's highest-poverty schools, special education students in these schools may be affected more by the lack of induction support for their teachers than special education students in lower-poverty schools.

Figure 4-9
Contributions of Induction Support Activities to Teaching



Source: SRI Survey of California Teachers (2003).

Note: Figure represents those teachers who reported that the support they received during their first and second years of teaching contributed "a lot" to their development as a teacher. See Appendix B for statistical information.

Throughout this chapter, we have explored many aspects of induction programs, including challenges to local implementation. Uneven program implementation at the local level can help explain the moderate impact of induction on teachers' knowledge and skills. However, new teachers are also affected by local policies and practices that go beyond the induction program. These broader workplace conditions, described in the next section, can contribute to the difficulties of beginning teaching and lessen the impact of induction programs.

Workplace Conditions for New Teachers

Many new teachers face unfavorable workplace conditions that affect their overall experiences and put limits on how much support induction programs can really provide.

Teaching Assignments

Rather than being given relatively manageable assignments, new teachers are often

given the most challenging assignments and undesirable schedules. New teachers are routinely assigned the introductory or lower-level courses, the largest classes, and the most "preps."[7] New teachers are often assigned classes with high proportions of English language learners and special-needs students, even if they are not prepared to teach those groups of students. The story of Alicia illustrates how the system for assigning courses can affect a new teacher's first year. Her experience was not unusual.

New Teacher Faces Challenging Assignment

Alicia, a second-year intern, taught science at a suburban high school. During her first year of teaching, she taught with an emergency permit. Before she had even begun teacher preparation, she was assigned three "preps"—a very tough workload for any teacher—that included two sections of integrated science, one section of life science, and one "math support" class for Title I students who had failed basic math. Alicia said she was given the math support class because "they knew I needed extra money and they needed someone to do it." Alicia described all the challenges of this particular class: "They had no books, so basically it turned into a study hall. Also, they were ESL kids. But I don't speak Spanish and, at that point, I had not taken a single course to complete my CLAD. It was ridiculous. It was small—10 kids in here. But it was terrible." She characterized the life science course she taught her first year as the "not-going-to-graduate science course" in which most of her students were on probation. In fact, she said the principal looked at her roster for the course and remarked, "Well, this looks like [the school's] most wanted list."

Teacher Release Time and Responsibilities

To create opportunities for new teachers to work with mentors, observe more experienced teachers, collaborate with colleagues, attend professional development, and reflect on their teaching practice, some schools and districts provide regular release time or reduce new teachers' teaching load. As shown earlier, most new teachers (74%) got release time to observe colleagues, but only a small fraction (13%) saw reduced duties (see Figure 4-4). Similarly, few schools have policies that preclude new teachers from taking on additional responsibilities. In this environment, many new teachers either volunteer for additional responsibilities or do not feel that they can say no when asked to take an additional job. As one teacher said, "I think a lot of the younger teachers, especially the real new teachers like myself, volunteer for stuff." Jose's story is illustrative of a new teacher who was asked to take on significant responsibilities in his first year, despite his lack of teaching experience or preparation.

[7] "Preps" refers to the number of different classes for which a teacher must prepare. For example, if a teacher teaches two periods of biology, two periods of chemistry, and one period of advanced biology, the teacher has three "preps."

New Teacher Assumes Leadership Role *in Addition* to Preparation Coursework and Challenging Teaching Assignment

Jose, a first-year teacher on an emergency permit, taught some of the more challenging classes at his suburban middle school while simultaneously taking a full load of courses to complete his preliminary credential. Despite this very full workload—and his lack of professional experience—he also assumed a significant leadership position at his school. "I'm the head of the EL [English language] department now, which I think is so ironic…because I have the least experience," he said. "I didn't necessarily want it, but I knew it would be a way for me to know how things work." Jose had numerous responsibilities as an English language department chair, including coordinating and administering the California English Language Development Test (CELDT), placing English learners in the correct classes, interpreting state law with respect to English language learners, setting standards for exiting the English language program, and acquiring textbooks. He received no compensation or release time in exchange for taking on these additional responsibilities.

Access to Appropriate Materials

Having access to appropriate instructional materials is critical for all teachers. Through exposure to different curricula and instructional materials over the course of their careers, more experienced teachers often have a wealth of materials from which to draw. New teachers, on the other hand, have not accumulated such resources; yet many reported that they were not provided with any materials, the materials they were given were not appropriate to their teaching assignment, or they simply were not oriented to the available materials. As a result, new teachers often need to spend significant amounts of time locating and organizing materials for instruction. These problems were particularly acute for new teachers working with some of the state's more challenging student populations—English language learners and special education students. One underprepared new teacher who was not provided textbooks appropriate for his class of newcomer English language learners described this as his "biggest frustration." Another teacher, a special education intern in her third year of teaching, described her first year like this: "When you come out here, there's nothing to work with. No curriculum was available to work with. I walked into a room, and my roll book had 28 special day class, behaviorally modified students in one class. I had seats for 24 and no books, nothing. I grabbed the seat of my pants and flew."

Clearly, poor workplace conditions can limit new teachers' chances at success. Unreasonable assignments, too little time, and inadequate materials present serious challenges even to seasoned veterans. In addition, these conditions may adversely affect new teachers' outlook on the profession and quell their desire to return for a second or third year, or to make teaching a lifelong career choice.

All teachers appreciate time to reflect on their classroom practice and work on improving it. For new teachers, this is especially critical. More manageable assignments and some reduction of responsibilities might open up valuable opportunities for new teachers to plan lessons, locate materials, individualize instruction to reach more students, reflect on what works, and seek out the expertise of more experienced colleagues. Such improvements to workplace conditions could support, rather than undermine, the important work of formal induction programs, helping to improve instruction and possibly keep more teachers in the profession.

Conclusion

As induction becomes a key step toward the professional clear credential in California, meeting the needs of all beginning teachers presents numerous challenges. The capacity of schools and districts to provide high-quality induction support depends on the availability of enough experienced teachers to serve as mentors, coaches, and support providers. Consequently, districts with high numbers of underprepared teachers and shortages of accomplished teachers are likely to struggle with the implementation of SB 2042. In particular, it is unclear how induction programs will meet the needs of newly credentialed teachers who have been working without a full credential unless there is a movement to combine preparation with induction for these teachers.

California's new requirements for beginning teachers are important steps in improving the capacity of those entering the teaching force. Although these requirements are well-intentioned, our data suggest that policy-makers should be wary about the unintended consequences if teachers view induction as merely another hoop to jump through. Overall, districts do not appear prepared to handle the needs of all beginning teachers as induction becomes the "preferred" option for obtaining the professional credential in California.

Induction programs that meet the specific needs of individuals and offer high-quality support are a promising means of shepherding new teachers into the profession. However, they alone do not determine whether new teachers will be successful in the classroom. As policy-makers consider how to strengthen induction, they also must consider how to ensure that new teachers have favorable workplace conditions and professional learning opportunities that support teachers' ongoing development. We turn to the topic of professional development in the following chapter.

5. Professional Development

Policy Update

- The economic downturn of the past few years has resulted in the elimination or reduction in scope and funding of the state's professional development initiatives. The California Professional Development Institutes (CPDI) no longer receive state funding. The California Subject Matter Projects (CSMP), Peer Assistance and Review (PAR), and Mathematics and Reading Professional Development Program (AB 466), meanwhile, have all seen their budgets reduced by at least 50% for fiscal year 2003-04.

Characteristics and Quality of Professional Development

- More teachers in our 2003 survey than in our 1999 and 2001 surveys reported participating in professional development activities that reflect the characteristics of high-quality professional development, including opportunities that build on individual teachers' knowledge, promote collaboration among teachers, and focus on subject matter content. However, the percentage of teachers participating in high-quality professional development is still low.
- Teachers reported only a moderate impact from their professional development activities—a finding consistent with previous surveys of California's teachers.
- In a few schools and districts, teachers are receiving training that reflects the characteristics of high-quality professional development. Two models of school-based professional development—coaching and professional collaborative work time—demonstrate these aspects when implemented in schools with supportive leaders and working conditions.

Challenges to Professional Development

- State and federal standards-based reform and testing requirements have narrowed the breadth of professional development offerings, focusing on language arts and mathematics at the expense of other subjects. These efforts have also influenced professional development activities, diverting attention from instruction to curriculum.
- Poor working conditions, competing time demands, contradictory messages about effective instructional strategies, and the overrepresentation of beginning teachers in low-performing schools affect the learning opportunities for teachers.
- The diversity of the workforce, in terms of teacher experience, assignment, and location, creates problems for developing statewide professional development initiatives that are applicable and meaningful to all teachers.
- Most survey respondents reported having special education students in their classrooms, but few of these teachers indicated that they have sufficient supports or training to adapt instruction for these students.
- Most survey respondents reported having English language learners in their classrooms, but fewer than half of these teachers indicated that they have sufficient preparation and training to teach this population of students.

Since the adoption of SB 1882 in 1988, California policy-makers have been engaged

in significant efforts to provide meaningful and coherent professional development to the state's teachers. Subsequent legislative enactments and programs, including the Mathematics and Reading Professional Development Program (AB 466), the California Professional Development Institutes, and Peer Assistance and Review, further demonstrated the state's commitment to building and sustaining a well-trained professional teaching force. California stands now at a critical educational crossroads, however. The state's ambitious professional development program has been weakened by the state's budget crisis. Funding cutbacks across the board have whittled down or eliminated financial support for state-sponsored teacher training activities. As a result, professional development providers are scrambling to reshape themselves to stay alive and relevant. More importantly, the budget cuts will further challenge teachers to locate and participate in coherent and meaningful teacher training activities.

Even with sufficient financial resources, however, the task before teachers is neither small nor simple. With a large number of entities involved in professional development, teachers face a loose network of professional development activities rather than a coherent system. The state, for example, supports a variety of its own initiatives, while schools and districts produce site-specific professional development programs. Private foundations, meanwhile, grant funds for various school improvement programs, and universities continue to offer a range of diverse degree programs and extension courses to enhance the skill sets and knowledge of California's teachers. The federal government allots funds to support teacher growth in a variety of subjects, and private providers furnish training to teachers, often related to curriculum and technology. Making sense of the often conflicting and contradictory messages about effective instructional practices received during professional development requires teachers' time, experience, and savvy—all of which will be tested during this period of reduced resources.

We begin this chapter by describing the state's key professional development policies and how they have changed in funding and focus. We then provide a picture of the professional development activities in which teachers are engaged, describing the characteristics of those activities and the contribution they have made to teacher development. Finally, we discuss the factors that affect professional development and its effectiveness.

The Changing Landscape of Professional Development Policies

Over the past few years, decreased funding has changed the scope and the nature of state-sponsored professional development. Once promising programs have either been eliminated or had their quality and scope threatened by severe budget cuts. Although the impact on teachers is yet to be seen, the gradual dismantling of these programs is likely to affect the strength of the teaching profession in the years to come. Similarly, curtailing funding for programs that better prepare teachers to instruct their students may affect students' ability to meet California's rigorous academic standards. This section details the original intent of the state's major professional development initiatives and how they have adjusted, or reinvented themselves, in this new fiscal environment.

Subject Matter Professional Development Programs

For more than 15 years, California has invested professional development funds for teacher training in specific subject areas. Starting with the California Subject Matter Projects in 1988, and with the addition of the Professional Development Institutes in 2000, California has recognized the importance of professional development tailored to particular content areas. This type of professional development, however, has been greatly affected by California's budget crisis.

Professional Development Institutes. Perhaps the hardest hit by the budget cuts has been the California Professional Development Institutes (CPDI) program. Several CPDIs, administered by the University of California's Office of the President (UCOP), were established in 2000 by AB 2881 and offered teacher training in reading, mathematics, and English language development in the form of summer institutes and follow-up work. CPDIs were legislated to prioritize teachers from schools in the 40th percentile or lower on the state's Academic Performance Index (API). As of August 31, 2003, more than 101,000 teachers had participated in CPDIs—59,007 in English language arts, 22,459 in English language development, and 19,705 in mathematics. Seventy-one percent of those teachers work in schools ranked 1 to 4 on the Academic Performance Index (UCOP, 2003a).

California Professional Development Institutes were not allocated any money in the 2002-03 and the 2003-04 state budgets. The legislation that established the CPDIs, however, is still in effect, and the CPDIs have not been dissolved. They carried over money from 2001-02 into 2002-03, which eased the transition, but that money will be spent by the end of fiscal year 2003-04 (UCOP, 2003a).

California Subject Matter Projects. Although the California Subject Matter Projects (CSMPs) have avoided the drastic fiscal blows delivered against the CPDIs, they also have seen their funding reduced by the budget cuts. The state's network of CSMPs was established in 1988 and reauthorized in 1998 (AB 1734) with a new organizational structure. Administered by UCOP, these projects aim to improve teachers' content knowledge in their subject area and identify teacher leaders. In the past several years, the CSMPs have been moving toward a greater incorporation of California content standards, a team approach to training teachers, and a focus on teachers in the state's lowest-performing schools. Projects in nine subject areas—writing, reading and literature, mathematics, science, history and social studies, foreign language, physical education and health, arts, and international studies—provide teachers with an intensive summer institute and follow-up activities during the school year. The CSMPs represent one way in which the state comes close to implementing a systemic approach to organizing and providing professional development. Each project's content is closely linked to the state's academic standards, the organization bridges the state's higher education and K-12 systems, and the content includes all of the UC/CSU A through G subject matter criteria required for California public university eligibility.

Seventy-five percent of CSMP training slots are reserved for teachers from schools below the 40th percentile on the API. Of the nearly 40,000 teachers who participated in CSMPs in 2002-03, 58% represented schools ranking 1 to 4 on the API, and 24% represented schools ranking 5 to 7 (UCOP, 2003b).

The CSMPs were allocated, and spent, $20 million in fiscal year 2002-03 and were not affected by midyear cuts. In 2003-04, CSMPs will receive $9.4 million—$5 million from the state and $4.4 million from federal No Child Left Behind (NCLB) funds. Federal funds will support training in all areas except foreign languages, arts, and physical education—unless the state authorizes those subjects in 2003-04 legislation. It is unclear at this time how, or if, the NCLB money will change the focus of the CSMPs (UCOP, 2003b; CDOF, 2003).

Curriculum-Focused Professional Development

In addition to the subject matter professional development described above, a combination of state and federal policies have also led to an increased emphasis on curriculum-focused professional development. California's Mathematics and Reading Professional Development Program and the federal Reading First program narrow the focus of professional development to specific reading and mathematics curricula. Although state funding for the Mathematics and Reading Professional Development Program has declined, the federal Reading First grant provides the state with new professional development money.

Mathematics and Reading Professional Development Program (AB 466). Passed in 2001, AB 466 established the Mathematics and Reading Professional Development Program, which began implementation late in fiscal year 2001-02. This program reimburses districts for teachers' professional development in reading and mathematics. Professional development consists of a 40-hour summer institute and 80 follow-up hours during the school year, and provides teachers with training that is specific to their grade level and the instructional program their school has adopted. Under AB 466, training must be conducted by a provider approved by the California State Board of Education. This training must also focus on state-adopted curricula. To receive AB 466 funds, districts serving students in grades K–8 must be using standards-aligned materials that have been adopted by the State Board of Education. (The State Board does not adopt high school instructional materials.)

Since 2001, 355 districts have applied to participate in AB 466 training; 181 of those districts have completed the professional development and received reimbursements from the state (CDE, 2003j). The California Department of Education has reimbursed districts approximately $43.9 million for the 38,633 teachers who received professional development. Of those teachers, nearly 65% completed 40 hours of professional development, 18% completed 80 hours of professional development, and 17% percent completed 120 hours of professional development (both the initial training and the follow-up) (CDE, 2003j).

The AB 466 program was originally proposed to be funded at approximately $110 million from the state general fund for fiscal year 2002-03. Because of decreased

general fund revenue, this amount was reduced to $63.5 million and cut to $62.2 million at the midyear review in May 2003. For fiscal year 2003-04, AB 466 is funded at $31.7 million. Districts will still be reimbursed $2,500 per teacher for professional development activities. The percentage of teachers eligible for reimbursement will decrease, however. In addition, for 2003-04, eligible teachers in schools that are in state intervention programs such as High Priority Schools Grants (HPSG) and School Assistance and Intervention Teams are required to participate in AB 466 training (CDE, 2003j).[1]

Reading First. Unlike AB 466, Reading First, a federally funded literacy program outlined in Title I, Part B, of the No Child Left Behind Act, is not affected by state budget cuts. Reading First subgrants to local education agencies (LEAs) are aimed at improving the reading skills of students in grades K–3, as well as special education students in all grades. AB 65 (2002) formally established the Reading First Plan and authorizes spending for it. In its initial phase, the program provides at least $132.9 million from 2002 through 2004 to California, and the state can reapply for funding over the following three years. The 2002-04 grant amount will cover 19,000 teachers and has not yet been fully consumed.

For each district that receives a competitively based Reading First subgrant, the state will distribute funds for half of its schools. Federal Reading First legislation requires that funds go to schools with the highest numbers or percentages of K–3 students reading below grade level, and that are identified as needing improvement or serving children in poverty (CDE, 2003l).

In summer 2002, in conjunction with the Reading First plan, a Reading Development Center was established at the state level, and seven Reading Implementation Centers (RICs) were created at county offices of education. The RICs, along with six additional "lead agencies," will receive Reading First funds to provide technical assistance to districts as they implement and maintain their Reading First efforts. All RICs are approved to be AB 466 trainers and will be supported with AB 466 money as well as Reading First money. AB 65 allocates $5 million to the RICs and an additional $1.4 million to the six regional lead agencies. The RICs were not yet fully functional in 2002-03—they did not serve any teachers. Eventually, they are intended to be "professional development brokers," bringing together professional development providers and teachers. Reading First funding will remain constant for fiscal year 2003-04 (CDE, 2003l).

[1] Teachers directly delivering instruction in reading/language arts or social science may participate in AB 466 professional development in reading/language arts. Teachers directly delivering instruction in mathematics or science may receive professional development in mathematics. In addition, teachers delivering instruction in a self-contained classroom setting may participate in AB 466 professional development for both reading/language arts and mathematics. Almost all full-time classroom teachers meeting the above requirements, regardless of credential status, are eligible for reimbursement.

District-Controlled Professional Development

In addition to curricula-based training, the state funds two large professional development programs—Peer Assistance and Review (PAR) and the Instructional Time and Staff Development Reform (ITSDR) program—that are planned and administered by the local districts. Although the state dictates the programs' goals and provides a framework for allowable expenditures, the implementation of the programs remains at the discretion of the local educational agencies and is essentially unregulated by the state. While PAR has had its allocation reduced, ITSDR's funding has remained stable for fiscal year 2003-04.

Peer Assistance and Review (PAR) Program. Established in 1999 by AB X1, PAR provides funding to compensate master teachers for assisting struggling peers. PAR funds also may be used to support a district's Beginning Teacher Support and Assessment (BTSA) program, activities previously funded under the Mentor Teacher Program, or any activities used to support or train new teachers. The state allocated $85 million for PAR at the beginning of the 2002-03 fiscal year (a reduction from the $125 million allocated in 2001-02), but the legislature reduced this amount to $65.2 million at the midyear review in May 2003. All money was given to districts, which can roll over PAR money from year to year but are not required to report spending or carryover to the Department of Education. It is estimated that many districts actually used more PAR money in 2002-03 than in 2001-02, even though the allocation was lower by almost half, because, in the first years of PAR, districts were not prepared to provide services and rolled over a large proportion of unused funds to the next year. As school districts develop systems for using PAR money, they are using the surplus funds from previous years. Because of the way the PAR legislation was written, the Department of Education has no authority to track the use or distribution of the money. The state has allocated $25 million for the 2003-04 fiscal year (CDE, 2003k).

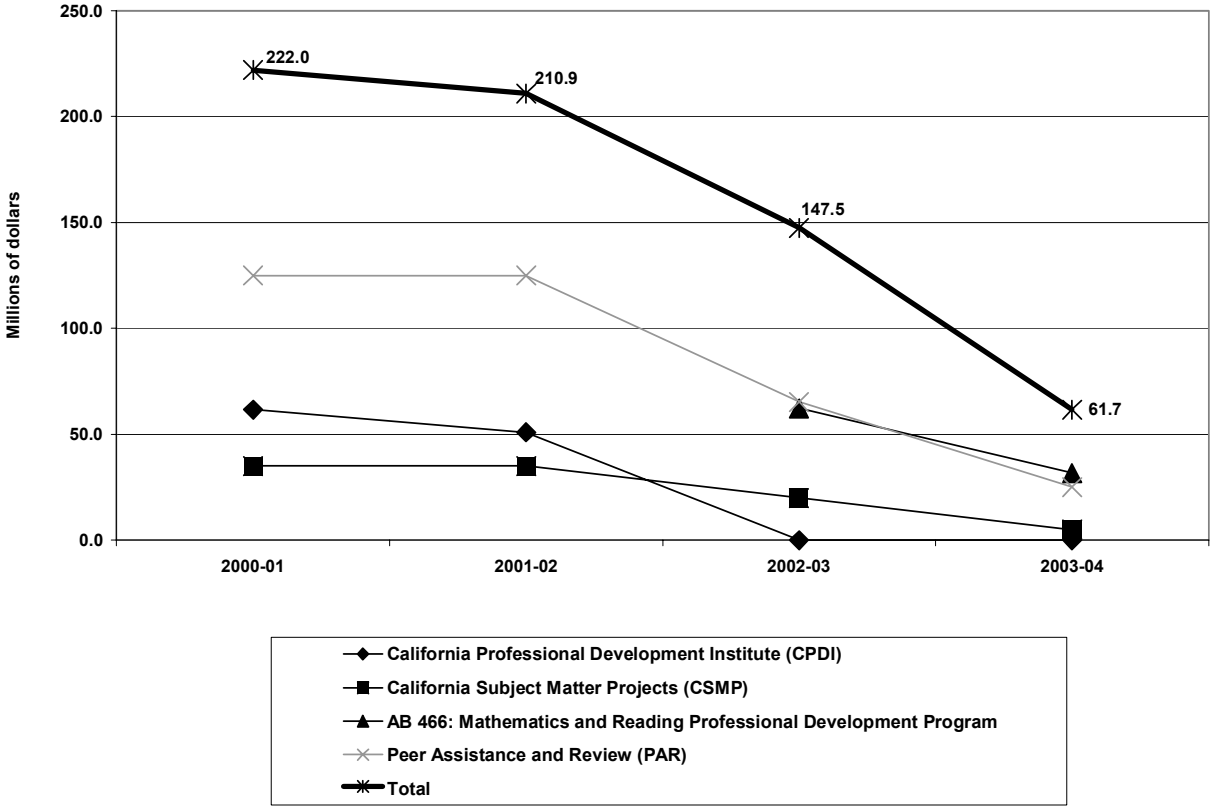
Instructional Time and Staff Development Reform. The Instructional Time and Staff Development Reform (ITSDR) program reimburses districts for training teachers and paraprofessionals in subject matter knowledge, teaching strategies, classroom management, conflict resolution, and other topics to improve student achievement in the core curriculum areas. The state compensates the district for each eligible faculty or staff member who participates in the professional development, up to a maximum of 3 days. Among teachers and administrators, these trainings are referred to as "buy-back" days and can take place throughout the school year. In 2002-03, approximately 300,000 teachers participated in ITSDR for at least 1 day. For the 2003-04 fiscal year, the total budget for ITSDR is $229.7 million, unchanged from the previous year. The state relies on external auditors to ensure that funds are used for appropriate professional development activities (CDE, 2003m).

Diminishing Funds for State Professional Development Programs

Professional development has been hit hard with the state's budget crisis. In four of the five major professional development programs in the state—California Professional Development Institutes (CPDI), Mathematics and Reading Professional Development

Program (AB 466), California Subject Matter Projects (CSMP), and Peer Assistance and Review (PAR)—allocations have been cut considerably. As Figure 5-1 shows, the total state allocations for these four programs decreased from $222 million in 2000-01 to approximately $62 million in 2003-04. Although ITSDR has experienced a slight decrease in funding since 2000-01, policy-makers have chosen to maintain 2002-03 funding levels for the program for 2003-04.

Figure 5-1
State Allocations for Certain Professional Development Programs, 2000-01 to 2003-04



Sources: CDE (2003i, 2003j); UCOP (2003a, 2003b).

Note: For AB 466, $31.7 million was allocated in 2001-02 but $0 was spent.

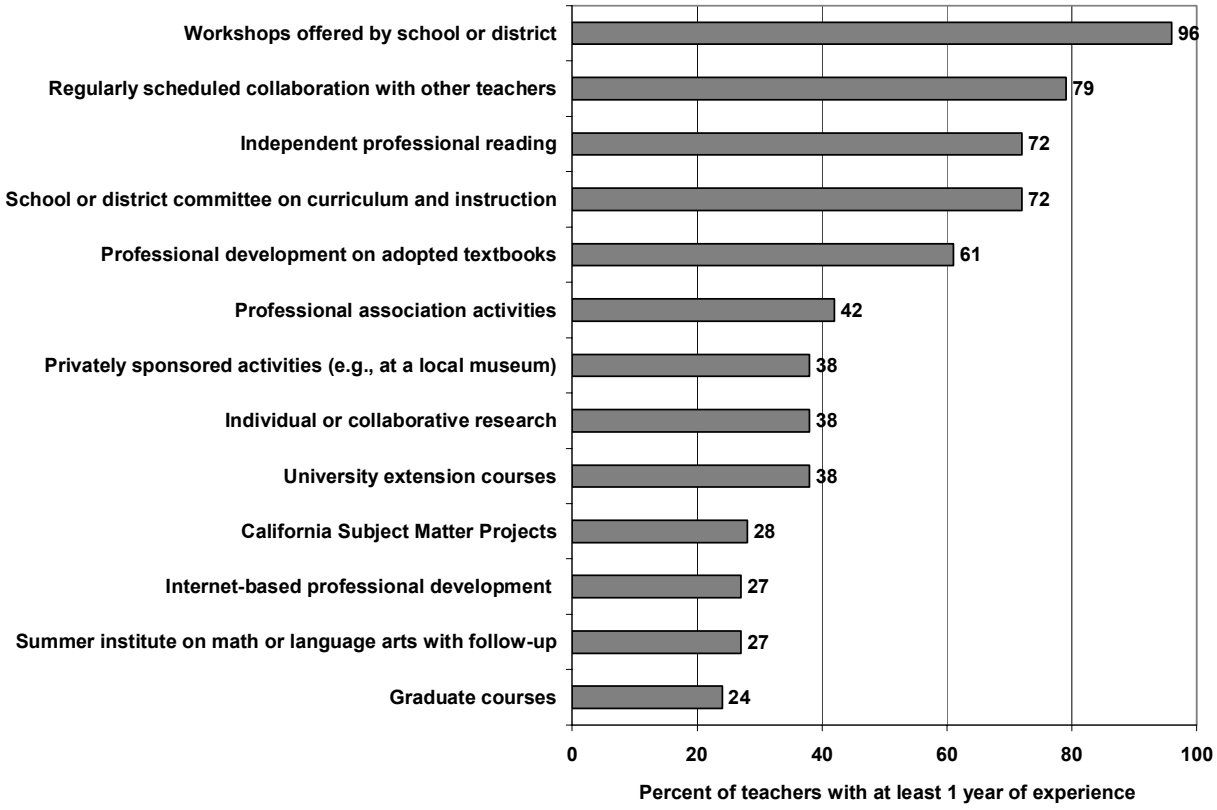
Although districts and schools are still operating with funds carried over from the previous year and some districts and schools have outside funding sustaining their professional development programs, the sharp decline in professional development funding raises concerns about maintaining the state's efforts to provide meaningful learning opportunities to teachers. The data we present in the rest of this chapter are based on teachers' reports of professional development they received in the 2001-02 school year, before the deepest budget cuts took effect. The diversity of activities teachers participated in, described in detail below, illustrates what the state may be jeopardizing by reducing funding allocations for teacher training initiatives.

Teachers' Participation in Professional Development Activities

During the 2001-02 school year, teachers remained engaged in many different types of professional development, ranging from workshops offered in their schools or districts to professional conferences and summer institutes. Because districts and schools rely on many sources of funding for their professional development, not just the state, the amount and type of professional development available vary considerably across districts and schools. Part of the variation can be explained by the amount of special funding schools receive to support professional development activities. Each funding source provides money with restrictions on how and for what purposes it can be spent. For example, one rural high school has devoted substantial resources to professional development from its High Priority Schools Grant and the Immediate Intervention/Underperforming Schools Program (II/USP—a program that provides financial assistance to schools that scored below the 50th percentile on the state achievement tests). A high school in a semi-urban district likewise received a grant that supported technology training for teachers. A rural middle school, meanwhile, had multiple funding sources for professional development, including II/USP, a Middle School Demonstration Grant, a National Science Foundation grant for mathematics, and a data analysis grant.

Through these varied sources of professional development, teachers reported participating in a wide range of professional development activities. Nearly all teachers (96%) attended workshops and training offered by their school or district, and nearly four out of five teachers (79%) participated in regularly scheduled collaboration with other teachers. Other popular forms of professional development included independent professional reading and working on a school or district committee on a topic related to curriculum and instruction (see Figure 5-2).

Figure 5-2
Professional Development Activities Reported by Teachers



Source: SRI Survey of California Teachers (2003); SRI analysis.

Note: See Appendix B for additional information.

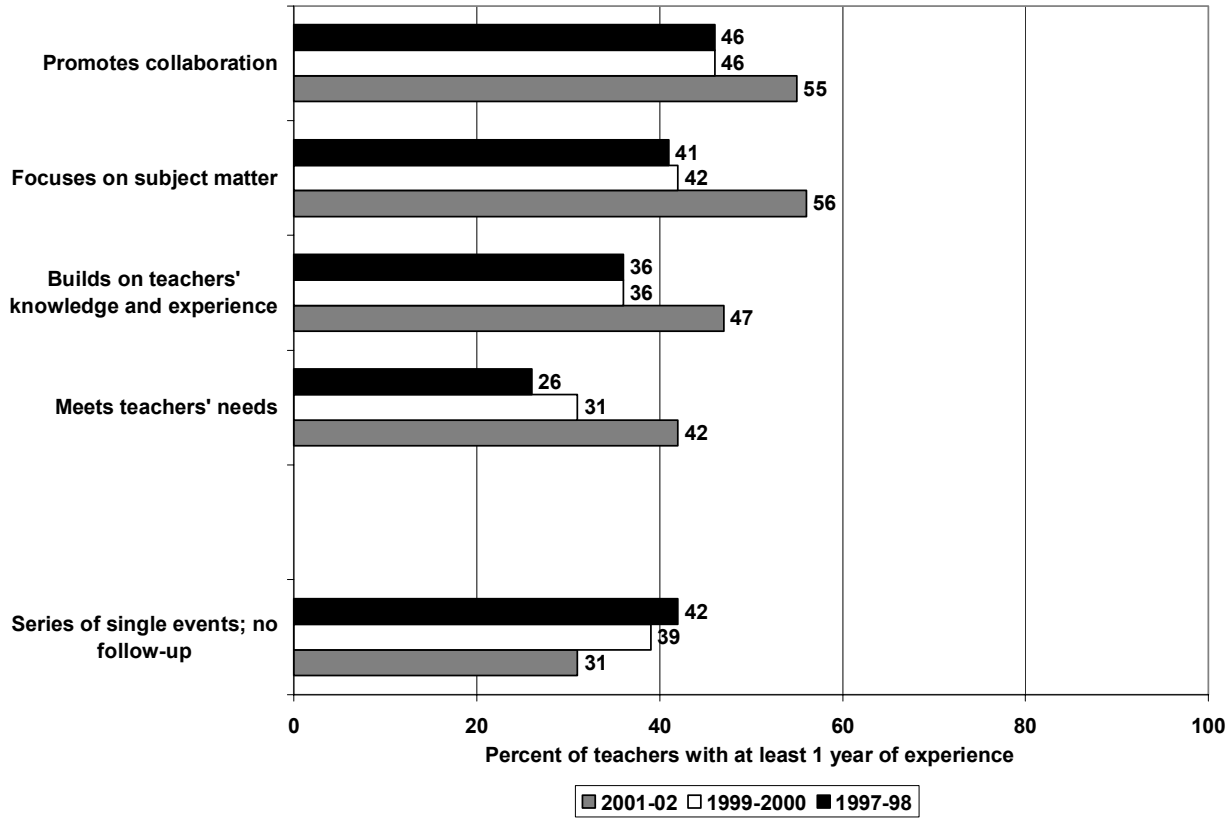
Changes in teachers' professional development activities over time reflect changes in the educational policy environment. California has adopted content standards in all state-defined core subject areas and, through AB 466, has directed professional development money to state-adopted curricula. Indicative of the state's emphasis, more teachers are involved in professional development activities that focus on curriculum, instruction, and subject matter knowledge. Although the percentages of teachers participating in the various types of activities generally mirror patterns from the past two statewide teacher surveys, there are two notable exceptions. The percentage of teachers participating in school or district committees related to curriculum and instruction increased significantly, from 66% in 1999-2000 to 72% in 2001-02. Also, more teachers participated in the California Subject Matter Projects, 28% in 2001-02, compared with 19% in 1999-2000. In addition, nearly two-thirds of teachers participated in professional development related to state- or district-adopted curricula.[2] Each of these professional development activities supports teachers' adoption of standards-based instruction.

[2] This item was not asked in previous surveys, so there is no way to gauge change over time.

The Characteristics of Professional Development

In addition to understanding the many different types of professional development teachers are participating in, it is also important to assess the quality of their learning experiences. The research on professional development indicates that high-quality teacher training focuses on content, connects teachers' learning to their experiences in schools, and fosters dialogue and professional collaboration among teachers around instructional and pedagogical issues (see, for example, Bransford, Brown, & Cocking, 1999; Garet et al., 1999; Corcoran, 1995; Darling-Hammond & McLaughlin, 1995; Little, 1993). In the past, however, professional development rarely reflected these characteristics (see, for example, Darling-Hammond & McLaughlin, 1995; Little, 1993). More often than not, professional development was short-lived and episodic, unconnected to teachers' workplaces, and indifferent to teachers' prior experiences. Both of our previous teacher surveys, conducted in 1999 and 2001, found that few teachers experienced professional development reflecting characteristics of quality. In fact, only about one-quarter of California teachers reported in 2001 that their professional development was sustained over time, with ample participant follow-up and teacher support. Thirty-nine percent reported that their professional development was a series of single events with little or no follow-up. Over the past 2 years, however, some shifts in the characteristics of professional development have occurred, with more California teachers experiencing professional development that embodies the principles of effective staff development (see Figure 5-3).

Figure 5-3
Prevalence of Certain Characteristics of Professional Development, 1997-98, 1999-2000, and 2001-02



Sources: SRI Survey of California Teachers (1999, 2001, 2003); SRI analysis.

Note: See Appendix B for additional information.

Our statewide survey data show that in the last 2 years more teachers have experienced professional development that builds on individual teachers' knowledge and experience, promotes collaboration among teachers, and focuses on subject matter content. Further, the number of teachers reporting that their professional development involved a series of single events with little or no follow-up has decreased significantly. Although more teachers are participating in professional development that reflects characteristics of quality, almost one-third of teachers are still participating in one-shot workshops, and fewer than half report that professional development meets their needs. Thus, while there is a positive trend toward more professional development with characteristics of quality, the percentage of teachers participating in such professional development is still relatively low.

Examples of Effective Models of Professional Development

Our case studies revealed two forms of school-based professional development—coaching and collaborative work time—that can exhibit many of the characteristics of effective professional development when implemented in supportive school contexts. We describe these below as illustrations of the type of effective professional

development that is possible, given the right school conditions.

Coaching. The use of coaches to work with individual teachers and groups of teachers was a common strategy in the districts we visited. At the school sites, the coaches performed a variety of tasks, including demonstrating lessons, observing teachers and providing feedback, and compiling student assessment data. Coaching models are especially popular in academically struggling schools, which tend to use a portion of their II/USP and HPSG funds to hire coaches. We saw coaching at all school levels—elementary, middle, and high, although mostly in language arts and mathematics. We did not encounter any coaches in social science, science, or foreign languages.

Overall, the coaching appears to be a popular and effective professional development strategy, particularly at the elementary and middle school levels. The training works well because it is site specific, is tailored to the teachers' needs, and comes from people who know the curriculum and the particular challenges encountered by teachers and students. "They help, especially with feedback," a middle school teacher said. "I like that they give written feedback, and when they do stay in, they rotate around the classrooms and they help the students to make sure they're getting the concept. So, I really see the coaches as being beneficial. It's like a nonthreatening person that you can go to and really ask for help." An elementary teacher expressed similar respect for the coaches: "When they do their thing, it is pretty helpful. They're knowledgeable, charismatic, good people to work with." According to an experienced elementary teacher, his most effective professional development experience this year involved working with the literacy coach on reading instruction for 2 weeks at the beginning of the year.

Getting on the Same Page: Coaching toward Common Instructional Goals

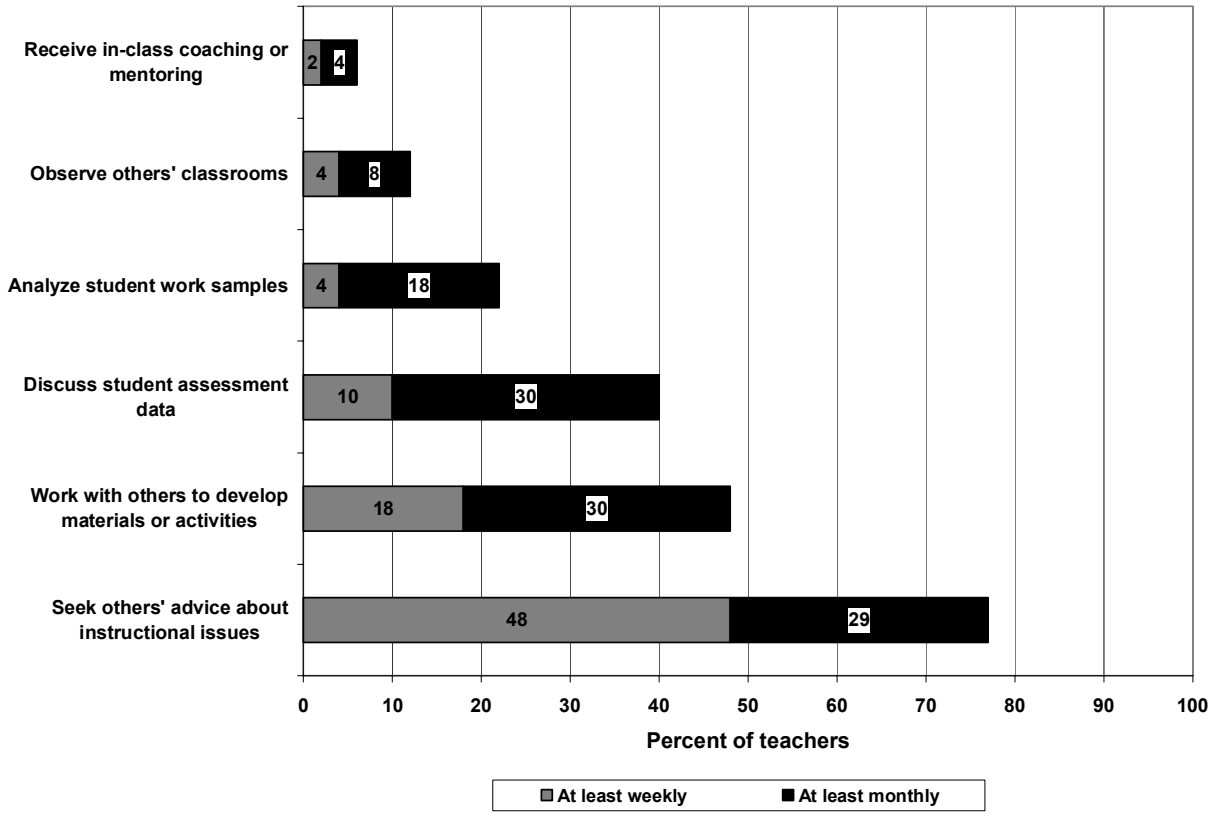
One urban district relies heavily on coaches to implement its schoolwide reform program, with at least one coach assigned to each school. The coaches' exact roles vary across schools, depending on each school's stage in the implementation cycle. At one school that was struggling through the early stages of the program, the coach provided training for teachers implementing the remedial reading program. At another school that was more advanced in the process, the coach conducted demonstration lessons, observations, and workshops. The coach also videotaped three teachers facilitating writing conferences with students so that the faculty could collectively view and discuss their practice at a staff meeting and understand how the strategy looked across different grade levels.

The most significant event at the more advanced school was the reform program's 'rollout.' When a particular grade level is 'rolled out,' the coach chooses a particular classroom in which to demonstrate a lesson each day. The school releases all grade-level teachers to watch the demonstration. Later in the day, all teachers return to their classrooms to teach the lesson they saw in the morning; the coach watches them and provides feedback. This continues for 20 consecutive days. To ensure she is providing useful support, the coach receives training on how to design the demonstration lessons, and part of her time involves planning them.

Although coaching is growing in popularity, only 6% of teachers receive in-class coaching or mentoring at least monthly (see Figure 5-4 in the following section). Participation in coaching depends on the willingness of the teacher to accept support. When teachers feel least threatened by others observing their classrooms, coaching realizes the greatest success. According to our case studies, underprepared teachers receive more in-class coaching than credentialed teachers. Beginning teachers tended to request and receive support, although more in the area of classroom management than for instructional assistance. Experienced teachers, meanwhile, were often reluctant to invite others to observe their classrooms or to heed the advice of coaches, especially if the guidance came from people with few years of teaching experience. Similarly, the greater isolation of instructional practice at the high school level can also temper those teachers' desire to participate in coaching.

Professional Collaborative Work Time. In addition to coaching, some schools in our case studies have dedicated time in their weekly schedules to enable collaborative work around instruction within grades and departments or for entire faculties. These schools have established minimum days, early-release days, delayed starts, or other creative scheduling to make time for faculty meetings or staff development. Again, this form of professional development occurs at all school levels—elementary, middle, and high. Our survey data also reflect the popularity of professional collaboration among teachers (see Figure 5-4), with teachers working together on various aspects of their jobs. More than three-quarters of California's teachers seek other teachers' advice about instructional issues and problems at least weekly (48%) or monthly (29%). Just under half (48%) work with their colleagues at least monthly to develop teaching materials or activities for particular classes, and 40% discuss student assessment data to make decisions about instruction at least weekly or monthly.

Figure 5-4
Teacher Engagement in Professional Collaborative Activities



Source: SRI Survey of California Teachers (2003); SRI analysis.

Note: See Appendix B for additional information.

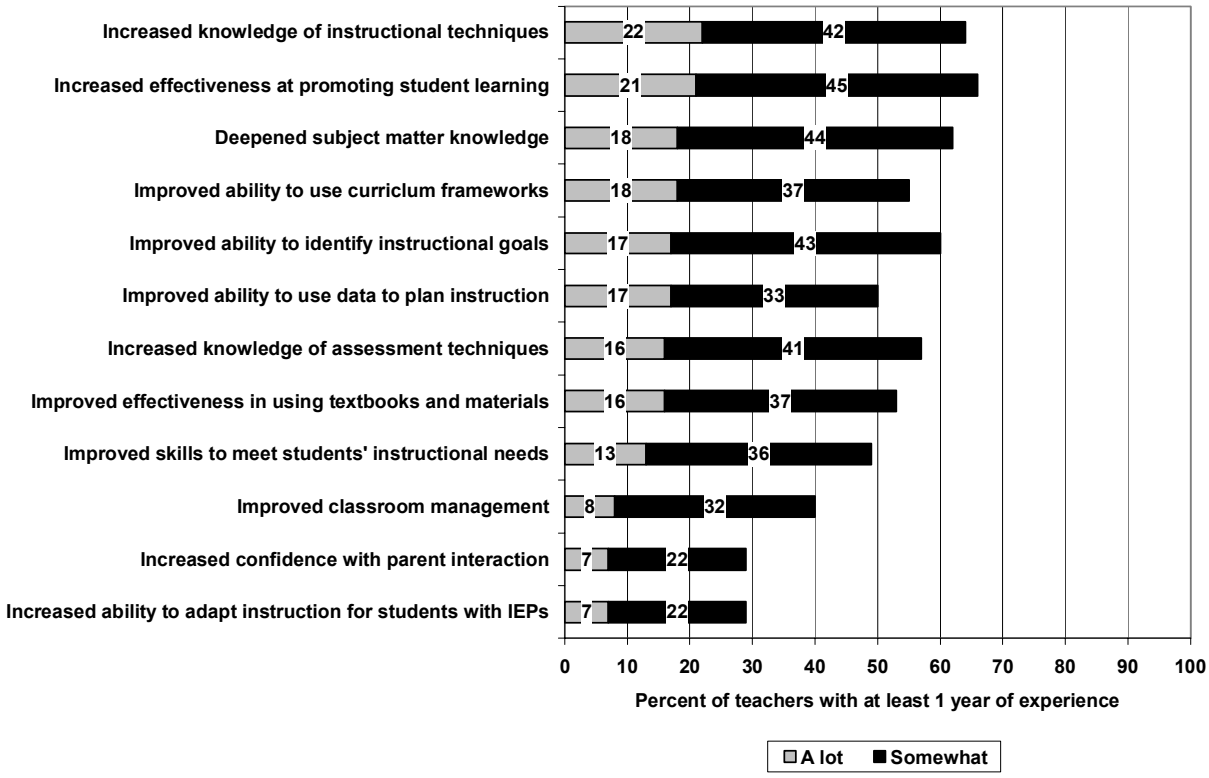
Teachers, particularly beginners, appreciated opportunities to observe other teachers and discuss curricular issues and instructional strategies with peers. Formal and informal teacher-initiated professional development earned high praise because of its focus and direct relevance to the needs of teachers. "The value of these informal sessions is twofold," an urban high school teacher said. "First, we are able to learn and share ideas with teachers who have a wealth of knowledge about teaching in general and about teaching at [this school]…Second, the networking provides a support system and a reality check." Departmental and grade-level collaboration, where structured and supported by school leadership, also ranked highly with teachers in our case studies.

Thus far, we have explored the characteristics of teachers' professional development and provided examples of promising training models (i.e., coaching and collaborative work time). Another measure of effectiveness is the extent to which professional development meets teachers' needs. In the next section, we turn to teachers' overall assessments of their professional development and the contributions that training can make to teachers' growth.

Overall Impact of Professional Development

When asked to reflect on all the professional development activities they participated in during the 2001-02 school year and the extent to which the activities contributed to their professional growth, teachers responding to our survey reported that it had only a moderate impact. As is shown in Figure 5-5, on all measures of impact, fewer than one-quarter of teachers reported that their professional development contributed to their development "a lot." Greater percentages of teachers reported that their professional development contributed "somewhat" to their development, a lower standard of effectiveness. Thus, for example, only 21% of teachers reported that their professional development increased their effectiveness at promoting student learning a lot; an additional 45% reported that their professional development contributed somewhat to increasing their effectiveness. Similarly, only 22% reported that their professional development increased their knowledge of instructional techniques appropriate for their subject matter a lot; a larger percentage (42%) reported that it contributed somewhat to increasing their knowledge. Fewer than 1 in 10 teachers (7%) reported that their professional development increased their ability to adapt instruction for students with individualized education programs a lot, and fewer than a quarter (22%) indicated that it increased their ability somewhat.

Figure 5-5
Teacher Reports on the Contribution of Professional Development



Source: SRI Survey of California Teachers (2003); SRI analysis.
Note: See Appendix B for additional information.

Although teachers reported only moderate impacts overall, many teachers were able to identify specific training activities that they felt contributed to their professional growth. In an effort to understand the different ways that professional development can influence teachers, we asked our case study teachers to describe their most useful professional development activity every 2 weeks. Below we present teachers' reflections on the contributions of their most positive professional development experiences.

Strategies and Materials for Immediate Use. Both new and experienced teachers appreciated instructional strategies or materials that they could use immediately in their classrooms. A third-year teacher expressed enthusiasm about a dual-language conference he attended because, as he explained, "The Dia de Los Muertos session came with all the lesson plans and links to the California social sciences standards, so it's ready to use for next year!" An intern with 2 years teaching experience, meanwhile, described how a literacy workshop changed her instructional practice. "The facilitator suggested that we create a mini-word-wall before we start a story," she explained. "This has revolutionized the 'preview and prepare' stage of reading in my classroom. After going over the word-wall together, the kids are so anxious to predict what the story might be about. It has turned the whole reading process into a much more exciting whole-group activity." Teachers also benefited from relearning strategies. For example, an experienced fourth-grade teacher participated in an activity during which he was able to "revisit concepts of SDAIE (Specially Designed Academic Instruction in English) that I learned several years ago."

Instructional Methods from Colleagues. Some teachers added new strategies to their repertoire after observing colleagues and sharing instructional practices. Teachers in our case studies valued seeing different models of instruction because it exposed them to concrete examples of how to teach the same content in a variety of ways. An elementary school teacher attended a grade-level meeting during which he and his fellow teachers watched a video of a teacher implementing reading lessons from the adopted reading curriculum. "It was good to see someone else teach the activities in the way they were intended to be taught," he stated. Observing what other teachers were doing also provided them with new ideas. An urban middle school teacher attended workshops led by his school's math coach on developing rubrics to assess student work. "The workshops require us to bring our own examples of rubrics and student work," he said. "I find this to be useful because it allows me to see what others are doing." Observation also reassures teachers that they are employing useful and appropriate teaching methods. A suburban elementary school teacher rated highly his meetings with the other fourth-grade teacher in his school, an experienced teacher. "I found out we're both progressing at about the same rate in our writing curriculum," he noted. "So I didn't feel like I was way behind."

Techniques for Meeting Every Student's Needs. Learning and applying new instructional strategies is most effective when teachers understand their students' needs. A suburban elementary school teacher worked with a coach to learn how to tailor instruction to meet the disparate educational needs of his students. As part of

this activity, he invited his school's reading specialist to observe him teaching a group of underperforming students. "She was able to see how my specific students reacted to my book introduction and lesson," he explained. "She gave me feedback per student."

Training on Procedures. Although training on procedures, paperwork, or new policies is mostly unpopular, some teachers even find this type of training useful. A teacher in a semi-urban elementary school, for example, attended a schoolwide meeting on administering the CAT-6 examination that explained which areas needed to be bubbled in, how long each test is, and when tests take place. New to the profession, he found this meeting informative. "I have never administered this test before," he said, "so I really needed the training." For special education teachers, procedures are a critical component of their jobs. A special education teacher in a rural high school attended a workshop where a facilitator described all the new individualized education program (IEP) forms. She rated this workshop favorably, noting, "I needed to know how to fill out the forms correctly for the IEP meetings." Although these activities may be a necessary function of teachers' work lives, the contribution of professional development on procedures to improving instruction and student achievement appears minimal.

The above descriptions reflect the possible—the activities our case study teachers decided were worth a special mention. As these teacher stories demonstrate, teachers can benefit from their formal and informal professional development opportunities in many ways. At the same time, however, teachers also told of times when workshops and collaborative meetings did not contribute to their growth. When asked to describe the most useful professional development activity he participated in over a 2-week period, Jose responded, "Sorry—nothing worth mentioning." Nancy described a mandatory schoolwide staff breakfast meeting as "a complete waste of time."

It is important to consider why teachers had mixed opinions about the contribution of their professional development. Our data indicate that the standards movement and accountability policies, working conditions, and the composition of the workforce all influence the impact of professional development on teachers' growth. We discuss each of these factors in the following section.

Challenges to Professional Development

Effects of the Accountability and Standards-Based Instruction Movement: A Narrowing Focus of Professional Development

The policy environment for districts and schools has changed over the past several years, bringing a push for increased coherence of professional development, curriculum, and accountability. With the adoption of state standards in core academic subjects, there is increased emphasis on the content covered by teachers. The focus on coverage is reinforced by accountability policies. Schools—particularly those scoring on the lower end of the API—are feeling increased pressure to improve student achievement on the Standardized Testing and Reporting (STAR) Program and the California High School Exit Examination (CAHSEE). In theory, focusing on state standards should lead to improved test scores. To accommodate the focus on

standards and accountability, however, the breadth of professional development has narrowed—both in the types of activities supported and in the content areas covered. As a result, professional development serves the needs of some schools and teachers while overlooking the needs of others.

The movement toward standards-based instruction has prompted schools and districts to devote significant staff development resources to aligning curriculum with state content guidelines. Alignment activities include "backward mapping" of curriculum to standards, identifying "power standards" (the particular standards that teachers identify as most important), and the production of pacing guides to ensure that all teachers cover the required curriculum at a uniform rate. During the year, at all school levels, departmental, grade–level, and staff meetings allocated considerable time to alignment, while some schools expended funds from II/USP, HPSG, and private grants, as well as federal funds, for additional activities. Alignment activities have been driven and supported at the district level. In one rural district, for example, the district created the District Leadership Team, consisting of department chairs, counselors, resource teachers, and the director of special education—22 members who met for 4 to 5 hours on Wednesdays. This team focused on identifying power standards and common subject area assessments. The goal of the professional development was the standardization of curriculum and assessments within departments and grade levels. Juan's experience, detailed below, demonstrates the positive aspects of the alignment activities.

Putting It All Together: Standards, Subject Matter, and Collaboration

Juan is a fifth-year, traditionally prepared Advanced Placement and Honors Spanish teacher at a rural high school. An active and mindful participant in professional development, he has assumed a leadership role in his school's reform initiative, Grade Level Leaders (GLL). GLL, part of the school's High Priority School Grant, brings together teachers from each content area to align curriculum and assessments to state or, in the case of foreign languages (for which there are no state standards), national standards. Juan and other GLL teachers met for 20 hours during the summer for training on standards, performance assessments, and how to work effectively in learning groups. Now they coach the rest of the school's faculty for 6 hours per quarter on linking curriculum and assessments with state standards. Juan described the GLL hours as "good quality time. [During one meeting] we worked on our final exams and aligned them to the standards. [We also] get to share with other teachers in the same [grade and content area] level." He credited these aligning-curriculum inservices with teaching the faculty how to interpret and apply the standards for instruction and fostering a more collegial atmosphere. In addition, GLL has given Juan the opportunity to work within his subject area, collaborate with other experienced teachers across disciplines, and develop instructional and assessment materials he can use in his classroom.

Another high school in a large urban district, in contrast, was so overwhelmed with accountability pressures that its professional development related to standards and accountability only served to cleave the faculty rather than foster improved instruction. That school's experience is detailed below.

Things Fall Apart: Professional Development on a Divided Campus

A divisive school atmosphere and inconsistent leadership encumbered the effectiveness of the professional development program at a high school in the district. According to the administration, the school had implemented a comprehensive professional development plan designed to promote student achievement through standards-based instruction. External auditors found little evidence of a strong program, however. The district audit, for example, found that the professional development at the site was fragmented and did not reflect district priorities of standards-based instruction, it did not translate into daily classroom practice, and staff considered it ineffective and not a valuable use of their time. The evaluators also concluded that the divisiveness of the staff resulted in a climate that inhibited collegiality and impeded school improvement efforts.

In an effort to institute changes, the school concentrated its efforts on aligning curriculum to the standards. The Departmental Committee (DC), composed of department heads and coordinators, assumed much of the responsibility for this endeavor. The DC advocated the adoption of standards-based instruction, but it was not always clear to teachers what that approach to teaching meant. Numerous, but not necessarily productive, department meetings were held to review the school's curriculum. Reportedly, these efforts involved ensuring that textbooks or planned units addressed each state standard. This approach failed to unify the staff; instead, it introduced concerns about standardization on the part of some teachers and relief from other faculty members that an attempt toward consistency was finally being considered.

According to teachers across our case study sites, curriculum alignment has produced mixed results for themselves and their students. Except in extreme cases, such as the high school described above, curriculum alignment activities have fostered more collaboration among teachers as faculty members work together to develop common unit plans, goals, and assessments. At one high school, teachers have shared rubrics and, although the school still has some "naysayers, we have a lot of teachers who have applied the goals and assessments. I think we are light years ahead [of where we were]. We speak the same language. We talk about power standards and target standards. We talk about rubrics now, and we couldn't have done that before." Although the curriculum alignment appears to affect those in leadership roles the most, teachers who produce materials that they can use in their classrooms appreciate the professional development activities, as well. On the other hand, some teachers believe that the push to align curriculum with the state standards has focused professional development on curriculum at the expense of instruction. Teachers are more familiar with what to teach but have not spent time focusing on how to teach the content effectively.

While the type of professional development activities has narrowed to curriculum alignment, the number of subject areas addressed has also decreased. Responding to the focus on language arts and mathematics for accountability purposes, schools have funneled a greater share of professional development resources to mathematics and language arts. At one urban high school, for example, "every effort is made to ensure that all professional development activities support standards-based instruction with a literacy and math focus." A rural county office of education has pursued a similar strategy, limiting its content to "mainly math and reading professional development."

Although restricting the breadth of professional development may allow teachers to channel their energies and efforts into improving mathematics and language arts achievement, the winnowing of choices comes with costs to curricular diversity and teacher growth. Those subjects—science and social science, in particular—not tested at each grade level become victims in this educational triage. At one urban middle school, for example, to enable its language arts teachers to give more attention to literacy, the administration shifted the teaching of social science to the science and math teachers. The school, however, provided no additional professional development to prepare these teachers for the extra duties. Thus, as the focus of professional development narrows because of increased attention to standards and accountability, the needs of some teachers are neglected.

The Impact of Workplace Conditions

The narrowing of focus is not the only barrier to high-quality professional development. Even when strong professional development models are adopted by schools, the implementation of these models can be affected by the school context.

Faculty Composition. Under the best circumstances, coaching and collaborative work time present meaningful learning opportunities to teachers. However, the realities of school workplace conditions can diminish the value of these professional development strategies. For example, the quality of the coaching can be affected by such aspects of working conditions as the coaches' years of teaching experience. At hard-to-staff schools, the lack of teaching experience in the faculty as a whole is also reflected in the experience levels of the coaches. At one urban school, the two coaches were in their third and fourth years of teaching. The lack of experience on the part of the coaches raises concerns about their capacity to support teacher professional growth and instructional improvement. This problem is particularly acute in schools with high teacher turnover and a disproportionate number of underprepared teachers.

Large faculties at overcrowded school sites can also reduce the effectiveness of coaches. Although there are more coaches in such struggling schools, they also tend to work with more teachers. Because of high teacher-to-coach ratios, coaches cannot work deeply with all teachers. At an urban elementary school, for example, each content coach works with about 30 teachers. Similarly, at a large urban middle school serving more than 3,000 students, the special education coach consults with the 20 special education teachers on campus, of whom 90% are first-year teachers and only 3 hold credentials. Another urban elementary school employs four full-time coaches (two for literacy, one for the schoolwide reform program, and another for math), who work with about 60 teachers. One literacy coach at another school serves grades K-2, and the other coach works with grades 3-5. "They have a lot of classrooms to take care of, so they can't just go around to check on people."

The churn of staff and an inexperienced teaching faculty can also direct coaches' energies and efforts to the newest staff members, leaving experienced teachers with fewer opportunities to be coached. Teachers often have to be pro-active to get coaching support, and new teachers tend to get more coaching; veteran teachers who desire

assistance beyond basic support must ask for it. "Well, I think that the reason why I only see them [math coaches] once a week or once every other week is because they're with those [struggling, new] teachers," an urban middle school teacher remarked. "I see that that's where they spend most of their time, is with those teachers, whereas teachers who kind of 'get it,' they'll drop in so that you know that they're there."

Overall, some teachers benefit considerably from working with a school-based coach or meeting regularly with colleagues. But when coaches themselves are inexperienced or can work with teachers only superficially because of their competing demands, or when collaborative time is devoured by administrative minutiae, teachers are less positive.

Time Demands. The realities of time in a school also affect teachers' abilities to engage fully in professional development. Responsibilities beyond normal teaching duties also chip away at time for training opportunities. In fact, teachers spend a considerable amount of time supporting others' professional development, perhaps at the expense of their own (see Table 5-1). Teachers with more than 1 year of experience reported the many ways that they contribute to the development of the teaching profession. Forty-one percent of teachers served as a grade team leader, department chair, or other school-based leadership position; and 19% provided workshops and other training for teachers in their school or district. Teachers also served as mentors for underprepared or novice teachers: 21% modeled instruction for preservice student teachers; 16% served as a master teacher for preservice student teachers; and 12% mentored interns, pre-interns, emergency-permit teachers, or new teachers not in BTSA. Teachers spent, on average, from 2 to 14 hours per week on these activities.

Table 5-1
Additional Activities Undertaken by Teachers

Activity	Percent of teachers	Average hours per week per participant
Serving as a grade team leader, department chair, or other school-based leadership position	41	3
Modeling instruction or demonstrating lessons for preservice student teachers	21	8
Providing workshops and other training for teachers in your school or district	19	2
Serving as a master or supervising teacher for preservice student teachers	16	14
Mentoring interns, pre-interns, emergency-permit teachers, or new teachers not in BTSA	12	3
Providing workshops and other training for teachers outside of your district	4	--*

Source: SRI Survey of California Teachers (2003); SRI analysis.

**Sample size too small to report statistics.*

Note: See Appendix B for additional information.

Among beginning teachers especially, burdens placed on them by personal pressure to bolster their résumés and accommodate administrative requests compete with professional development for attention. In fact, 19% of teachers with 1 or 2 years of experience and 31% of teachers with 3 to 5 years of experience serve as a grade team leader, department chair, or other school-based leader.

Conflicting Professional Development Messages. Fragmented programs and efforts occurring simultaneously in schools also affect teachers' professional development. Even with the narrowing of state professional development opportunities, most teachers experience fragmented training, piecing together various components throughout the year but failing to complete a unified picture. Fragmentation results from a variety of factors, including the diverse array of state, federal, and private professional development resources available to teachers, the lack of a central organizing authority to coordinate training, and overlapping school reforms and curriculum adoptions. A veteran teacher at an urban middle school, simultaneously implementing state-adopted curricula and a schoolwide reform program, described professional development at the school as "scatterbrained." She explained, "No one knows how to put it all together."

The disparate professional development offerings send conflicting messages to teachers about what constitutes high-quality and effective instructional practices. Much of the privately funded professional development does not directly support the

curriculum adopted by schools. While one rural elementary district, for example, adopted the state-adopted curricula, it also received a National Science Foundation grant to implement math and science curricula with a different instructional approach. Reflective experienced teachers with sufficient on-site instructional support and the freedom to supplement the curriculum may be better equipped than beginning teachers to resolve the inconsistencies between divergent instructional approaches.

For teachers at all levels of experience, workplace conditions can overwhelm even the best-planned professional development. Coaches can be inexperienced or have impossible workloads. Teachers can have too many demands on their time. In addition, schools can have so many different programs operating that professional development becomes confusing and contradictory. Even in the case study schools where the workplace conditions were more amenable to teacher learning, difficulties emerged in meeting the needs of all teachers. This concern is discussed in the next section.

Meeting the Needs of a Diverse Teacher Workforce

Although coaching, if done well, can be tailored to the skills of individual teachers, professional development is rarely differentiated for its multiple audiences of beginning and experienced teachers, credentialed and underprepared teachers, English and science teachers. The result, stated simply, is that much training has difficulty meeting all teachers' needs.

Professional Development for New and Experienced Teachers. The implementation of AB 466 illustrates the challenges of helping all teachers through one program. Training provided under the auspices of AB 466 focuses on state-adopted instructional materials in mathematics and language arts. Experience levels dictate, to a degree, how relevant the teachers consider this professional development to their needs. "New teachers like the ready-made programs," an urban elementary teacher commented, "but they do not know how to implement them. Three days of training is not enough to implement. You do not know how to do it." In schools and districts with a majority of inexperienced or underprepared teachers, professional development on how to use adopted curricula tends to be appreciated by beginning teachers because of the structure it provides. In these districts, administrators, dealing with large numbers of underprepared teachers and constant staff turnover, design professional development to meet the needs of novice teachers in core academic subjects. "Everything is in the teacher's guide for teachers," an urban elementary school principal stated. "For new teachers or for teachers who had to focus on the mechanics of teaching reading, they needed a program. They needed a set of guidelines, because they could no longer do their own thing." This undifferentiated approach leaves experienced teachers and teachers with atypical assignments, such as special education, with few to no school-based professional development opportunities that they feel meet their needs.

In our case study schools and districts with low proportions of underprepared and inexperienced teachers, faculty frequently question instruction based exclusively on

adopted materials. They feel that the training is not meeting their needs beyond a basic introduction to the curriculum. In these districts, teachers possess training and experience in other pedagogical philosophies and are more likely to integrate a variety of curricular and instructional approaches into their teaching. A teacher in a suburban district explained that the district requires her to teach to the standards and use the district-mandated instructional programs. She acknowledged, however, that teachers have considerable freedom in designing and using classroom materials to supplement the required curriculum "as long as you run a successful program." AB 466 training is not helping experienced teachers look more broadly at their instructional approaches; professional development on the adopted curriculum is too finely focused for them. For example, experienced teachers expressed criticism of the initial 40 hours of training provided under AB 466 because the weeklong training does not present a nuanced view of teaching or offer strategies for differentiation using the adopted reading curricula. After 5 days of training, an experienced teacher stated that she had heard nothing that would change her teaching practices because the trainers told her to just do what the book suggests.

Teachers relied on other supports to fill in gaps in the initial professional development. The on-site support that teachers received from coaches better served their specific needs. The literacy coach at an urban elementary school, for example, supplements the initial training teachers receive, individualizing her support for each teacher and expanding instruction beyond strict adherence to the lessons presented in the adopted reading curriculum. She works with struggling teachers on the basic components of the curriculum, while helping more advanced teachers structure their instruction so that all students' learning needs are met. Teachers appreciate her efforts: "I've been going to the BTSA meetings [that focus on the reading curriculum]," a first-year credentialed teacher noted. "The ones here have been more helpful. The literacy coach is in charge, and she does a really good job presenting. She presents things that she has seen at her other meetings that have been helpful."

Professional Development for Teachers of Special Populations. Whether new or experienced, special education teachers struggle to participate in meaningful professional development opportunities. At a rural high school, special education teachers' professional development challenges are further complicated by their lack of contact with mainstream teachers. One teacher noted, "I've noticed special ed is like a school within a school. It's completely separate." Another said, "It would be nice if I sat in on an English department meeting since I teach English." Still another teacher did not believe that the interdepartmental approach would be beneficial: "The administration hasn't found an effective way to have us work together on curriculum, but we're teaching two different worlds." This situation has been amplified by the increased focus on standards and curriculum alignment. Although no state standards for special education exist, teachers are expected to use the existing standards but make accommodations to reflect each student's IEP. At her rural middle school, a special education teacher has been told to incorporate standards into her instruction but has not received any guidance on how to do so. A mentor teacher at a rural high school reported that special education has not been included in the standards alignment at the school because "No one has given us the standards."

Teachers in schools without a separate special education department and who work with students from multiple grade levels find it difficult to participate in standards-focused professional development activities. Because the curriculum alignment activities are conducted by grade level and subject cohorts, special education teachers are at a distinct disadvantage because they are responsible for students from a range of grades and subjects. Any effort to align special education curriculum to standards would have to be accomplished by individual teachers working with several sets of standards. The experience of Bethany, illustrated below, further details this problem.

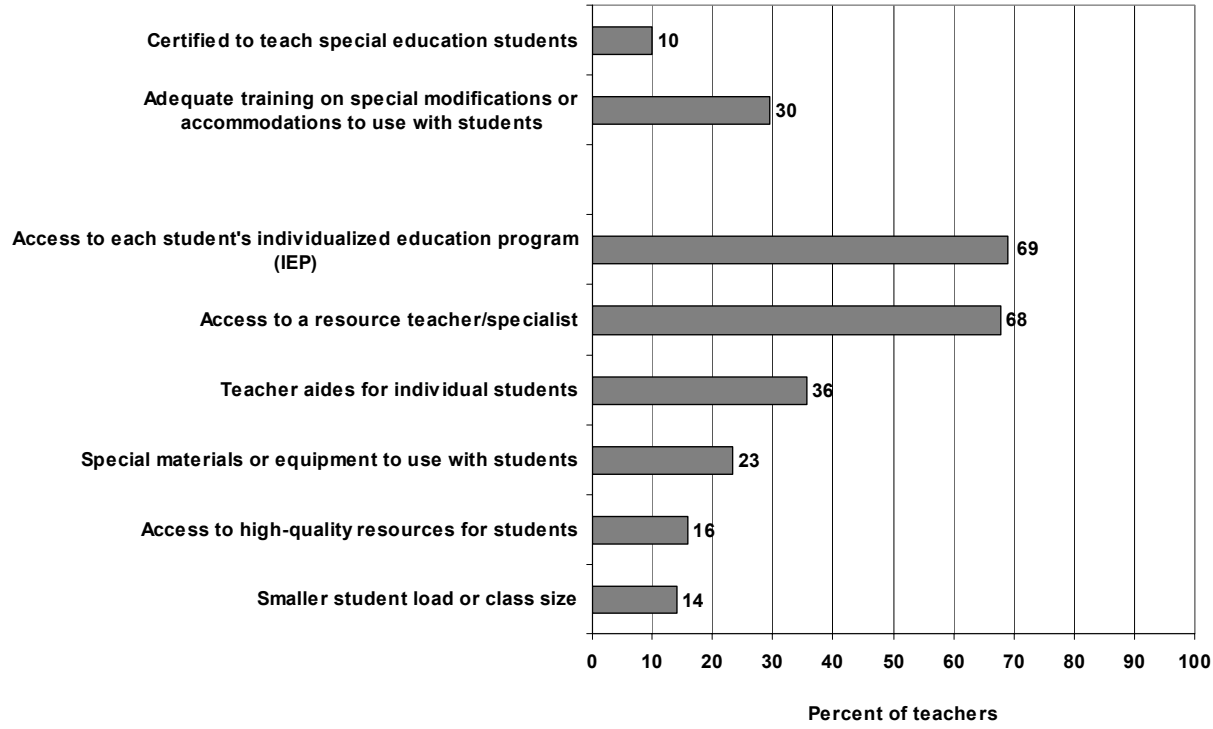
Left Out: Special Education, Standards, and Professional Development

Bethany is a second-year special education intern at a rural middle school. Aligning curriculum to standards and developing benchmark assessments—collaborative efforts to increase test scores—were key professional development messages at her school this year. Despite the fact that special education students are required to take the state's standards-based tests, special education teachers have not been fully included in these curriculum alignment activities. The administration told Bethany to incorporate standards in her instruction but has not provided her with any guidance on how to proceed. It is not clear to her how special education teachers can align curriculum to standards while also taking into account students' disabilities. In addition, at her school, special education teachers do not meet as a department, so the special day class teachers rarely work together. When they do meet, they seldom discuss instructional issues. "It doesn't seem like a real collaboration," she noted. Bethany would have to make any effort to align special education curriculum to standards independently. The school administration provided her with no alternative professional development activities.

In general, meeting the needs of special education students has not been a focus of professional development for many teachers—special education and general education teachers alike. Two-thirds of teachers (67%) reported that their professional development contributed only a little or not at all to their ability to adapt instruction for special education students.

The lack of attention to special education in professional development is problematic, given the percentage of teachers who work with special education students. Eighty-eight percent of teachers reported having special education students in their classes. Of those teachers, only 10% reported being certified to teach special education students, and only 30% indicated having adequate training on special modifications or accommodations to use with students. Additional training to work with this population of students seems critical, given teachers' lack of other supports (see Figure 5-6). For example, 69% of teachers reported having access to students' individualized education programs (which, in theory, should be accessible to all teachers of special education students), and 68% reported having access to a resource teacher. Only 23%, however, had special materials or equipment to use with special education students, and only 16% had access to high-quality resources for special education students. Four percent of teachers reported that they received no support.

Figure 5-6
Supports for Teaching Special Education Students

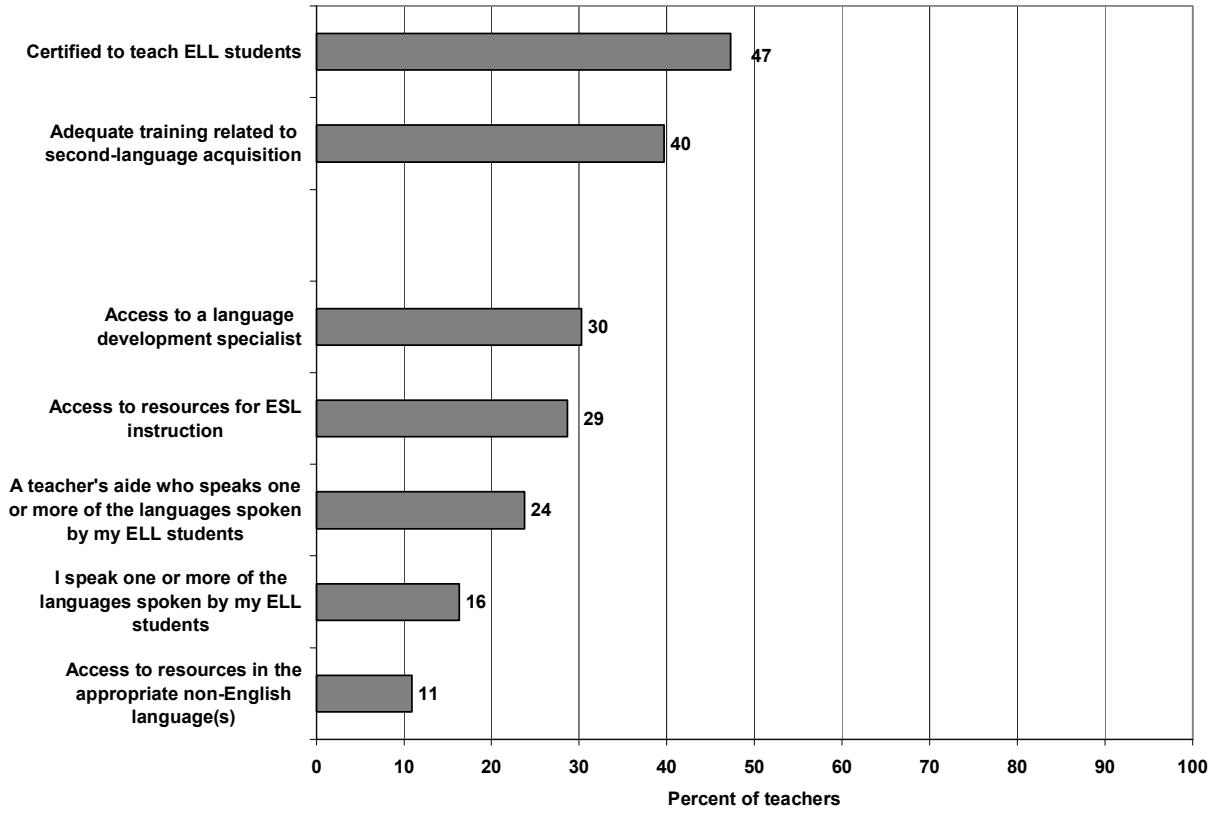


Source: SRI Survey of California Teachers (2003); SRI analysis.

Note: See Appendix B for additional information.

We found a similar trend among teachers of English language learner (ELL) students (see Figure 5-7). Eighty-seven percent of teachers reported having ELL students in their classes. Of those teachers, only 47% were certified to teach ELL students (e.g., CLAD, BCLAD, Bilingual Certificate of Competence, Language Development Specialist Certificate), and only 40% reported having adequate training related to second-language acquisition. Again, if teachers lack other supports for teaching ELL students, then the training is all the more important. Only 30% of teachers with ELL students had access to a language development specialist who provides direct services to students and/or consultation with teachers, 29% had access to high-quality resources for English-as-a-second-language instruction, and 11% had access to high-quality resources in the appropriate non-English languages. Seven percent of teachers with ELL students in their classes reported receiving no support .

Figure 5-7
Support for Teaching English Language Learner Students



Source: SRI Survey of California Teachers (2003); SRI analysis.

Note: See Appendix B for additional information.

Providing adequate training to all of California's teachers is a formidable task. An undifferentiated strategy is bound to address some teachers' needs while overlooking the needs of others.

Conclusion

The state's diminishing investment in teachers' professional development raises questions about the capacity of the system to meet teachers' continuing learning needs. Although teachers rated the contribution of their professional development to their practice as moderate at best, more teachers in the state were just beginning to experience professional development that reflected effective, high-quality characteristics. These data reflect a new trend, one that was not evident in the data collected over the previous 4 years. However, the pattern emerged just as the face of professional development in the state began to change, with a narrower focus on specific curricula and a substantial decline in financial resources for professional development.

There are two primary issues at hand. One issue is the level of resources available for ongoing teacher training. The 2003-04 budget cuts will reduce considerably the

number of teachers participating in state-sponsored professional development. The other issue is how those limited resources are used. It is important to ensure that resources are directed to professional development that contributes to teachers' instructional practices and ultimately to student learning.

Professional development is already challenged to address the various needs of new and experienced teachers, credentialed and uncredentialed teachers, elementary and secondary teachers, teachers of different academic disciplines, and teachers of special populations. With less professional development available, the state must face the question: will teachers be able to hone their skills so they can teach diverse student bodies and prepare them for college and beyond?

6. Summary and Recommendations

The central theme of this report has been simple: as the state raises standards for students and schools, it assumes the responsibility to ensure that the teacher workforce has the skills, knowledge, and support necessary to help students reach those standards. Here, as in past reports, we have documented the shortage of fully prepared teachers in the state's classrooms. Although this situation is certainly improving, the least prepared teachers remain concentrated in schools with students most challenged to meet the higher state standards. We have underscored the difficulties facing special education students and English language learners and pointed out that, again, these students are less likely than their peers to have a fully prepared teacher.

We also have continued to document state policy-makers' efforts to address these problems. By school year 2000-01, policy-makers had established a number of initiatives to increase the flow of fully prepared teachers into the system and to provide increased support to retain teachers. In addition, policy-makers had taken action to bring coherence and higher quality to the training that new and experienced teachers receive to help them develop professionally.

There is evidence that these policies were beginning to have their intended effect. The number of newly prepared teachers increased; the number of underprepared teachers began to go down; and more underprepared teachers were receiving structured support through the expanded intern program. A larger proportion of eligible first- and second-year teachers were receiving induction support than at any time in the past, and state-sponsored content-focused professional development reached greater numbers of teachers.

However, this progress is threatened by a series of economic and policy shifts in California. The state now struggles with a weak economy, reduced state revenues, and a soaring budget deficit. The new federal legislation, No Child Left Behind, puts pressure on the teacher development system to ensure that all teachers in core subjects are "highly qualified" (interpreted by California as being fully credentialed or participating in an intern program).

The impacts of these shifts are already apparent. The state's investment in recruiting new teachers has been reduced significantly. The California State University system, which prepares the majority of teachers in the state, is facing severe budget cuts, and some campuses are capping enrollment in teacher education. Efforts to improve the quality of the teacher workforce through performance assessments at the end of the preparation period have been put on hold. Funds for state-sponsored professional development have been dramatically reduced.

We do not yet know what the longer-term impacts will be. Faced with a weak job market in the private sector, more teachers may be attracted to the teaching profession, and fewer teachers may leave the profession. Combined with the federal push for more "highly qualified" teachers, California may experience a continued decrease in the

number of underprepared teachers—or at least the number of underprepared teachers who are not in an intern program. In fact, data from a subset of large districts for the 2003-04 school year suggest just such a trend. Conversely, less investment in the teacher pipeline, along with an eventual upturn in the economy, may have the opposite effect over the long term and perpetuate the shortage of fully prepared teachers.

Regardless of future trends, the data presented in this report suggest that policy-makers and educators still have much work to do to support the current teacher workforce. Even under the best circumstances, the shortage of fully prepared teachers will not disappear, in part because of an expected increase in teacher retirements. The special challenges associated with English language learners, special education students, and poor and low-achieving students will remain with us. Support for new and veteran teachers will need to be strengthened, not weakened, as standards rise.

Recommendations

Policy-makers are urged to consider the following recommendations derived from these findings.

Preparing and Licensing Teachers

1. The California Commission on Teacher Credentialing should eliminate, by September 1, 2005, emergency permits for special education teachers and, to that end, move current permit holders into intern programs within 1 year.

2. The California Commission on Teacher Credentialing and the State Superintendent of Public Instruction should take all appropriate steps to ensure that school districts use remaining pre-intern funds to accelerate the progress of special education emergency-permit holders toward a full credential.

3. The Governor and the Legislature should immediately conduct a formal review of the quality and effectiveness of teacher intern programs. The expansion of and support for intern programs should be based on the results of this review. In addition, the California Commission on Teacher Credentialing should take all appropriate steps to ensure that these programs provide consistently high-quality preparation and mentoring. The Commission should pay special attention to beginning teachers' transition between participation in intern and induction programs, eliminating redundancies in responsibility and content and better meeting the needs of teachers who are entering the profession through alternative routes.

4. The California Commission on Teacher Credentialing and the State Board of Education should collaborate to align standards for teacher development programs, performance assessments (including the Teaching Performance Assessment), and accountability measures to ensure that programs for beginning teachers are effective and reflect the components of the state's student academic achievement system.

Ensuring an Adequate Supply of Teachers

5. The Governor should include in his budget funds for the Chancellor of the California State University and the President of the University of California to create incentives to develop and implement regional campus programs for preparing an adequate supply of teacher candidates for high-need geographic and subject areas, including special education, English language instruction, mathematics, and science.

6. The Legislative Budget Committees should evaluate, as part of their regular deliberations on the 2004-05 Governor's Budget, the existing statutory incentives for teacher recruitment, including the Assumption Program for Loans in Education, CalTeach, Cal Grant T, the Governor's Teaching Fellowship awards, Regional Teacher Recruitment Centers, and the Teaching as a Priority Block Grant program, to determine which efforts have improved the recruitment and hiring of fully qualified teachers in low-performing and hard-to-staff schools. The Legislature should restore funding to those efforts found to be most effective.

Building Teachers' Skill and Knowledge

7. Beginning in June 2004, the Governor and the State Superintendent of Public Instruction should direct a portion of the Mathematics and Reading Professional Development Program (AB 466) funds toward training special education teachers in integrating the state's student academic standards and adopted curricular materials into their instruction. First priority should be given to emergency-permit holders and interns who teach in high-poverty, hard-to-staff schools.

8. In 2004, the State Superintendent of Public Instruction should establish as a first priority the development of high-quality professional development for school-based teams of classroom teachers at the Reading Implementation Centers. These teams will be responsible for adapting curriculum and instruction to accommodate special-needs students in reading. This strand of professional development should be designed jointly with leaders of effective, district-sponsored programs and accomplished, veteran special and general education teachers.

Including in Teacher Development All Curriculum Areas Required for Graduation

9. The State Superintendent of Public Instruction, in collaboration with the University of California Office of the President and the California Subject Matter Projects, should develop and implement a teacher professional development cycle that addresses all subject matter content required for high school graduation and California public university admission. The cycle should coincide with the state's textbook adoption cycle and include language arts, mathematics, science, history, foreign language, and visual and performing arts. Within each subject matter area, the unique pedagogical needs of teachers of

special education students and English language learners should be recognized and accommodated.

10. The Governor should restore full funding for the California Subject Matter Projects in all content areas specified in the 4-year California public university A through G admission requirements.

Working toward Better Management of the State's Resources

11. The Superintendent of Public Instruction should conduct a thorough review of the Education Code provisions related to teacher professional development and recommend to the Legislature statutory changes needed to (1) eliminate those professional development requirements that are redundant or ineffective, and (2) consolidate the remaining programs into professional development block grants that are responsive to both state priorities and the need for local flexibility.

12. The Governor and the Legislature should establish a state-level, independent organization composed of representatives from agencies that collect data on the teacher workforce to oversee and strengthen the state's teacher data collection and reporting system. This independent entity would ensure that data collection procedures allow for timely, accurate analysis of longitudinal teacher supply and demand information, provide coordination among agencies, and provide state policy-makers with annual analyses of these data.

Building a Teacher Development System

In addition, it is urged that the Governor and the Legislature give priority, over the next 2 years, to the development of a comprehensive and coherent system of teacher development for the state. It is recommended that:

13. The Secretary of Education convene a working group to develop and recommend to the Governor and the Legislature specific steps needed to build on the existing framework for teacher preparation (SB 2042) and professional development (Morgan-Hart Act, SB 1882) to establish a cohesive, accountability-based system of teacher development that includes preparation (subject matter content and pedagogical knowledge, and student teaching), recruitment, support for all beginning teachers, and ongoing professional development.

14. The Secretary of Education consider and extend the work of the K-16 Master Plan Committee, the Task Force on Recruitment, Preparation and Retention of Special Education Teachers, and other relevant entities.

15. The Secretary of Education give the highest priority to ensuring that the state's programs for teacher preparation (including CLAD, BCLAD, and requirements for the preliminary teaching credential), induction (including the CFASST system), and professional development focus on a coordinated, consistent approach to providing teachers with the content knowledge and pedagogical skills needed to help all students, including special education students and English language learners, meet the state's high academic standards.

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Appendix A. Data Collection Methods and Analyses

This appendix details the design of and procedures for the major data collection methods and analyses. Specifically, we discuss the sampling, administration, and analysis of the survey and case study data collection.

Survey of California Teachers

The 2003 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 professional development experiences. A random sample of 834 full-time K-12 teachers in California was asked to report on a variety of topics, grouped into the following sections:

- Teaching Assignment and Credential
- Preparation
- Job Search
- Support for New Teachers
- Workplace Support
- Professional Development
- Teacher Background

Respondents were given specific instructions about the time period each question referred to, and certain questions were asked only of subgroups of teachers for whom they were appropriate. Table A-1 describes the type of respondent for each section and the time periods to which the questions referred.

Table A-1

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 (2002-03)
Preparation	All	Period of preparation program
Job search	All	Period of job search
Support for new teachers	Teachers with five or fewer years classroom teaching experience as of January 2003	First 2 years of teaching
Workplace support	All	Current school year (2002-03)
Professional development	Teachers in at least their second year of teaching in 2002-03	2001-02 school year
Teacher background	All	Current school year (2002-03)

**The SRI Survey of California Teachers was administered from January 2003 through May 2003. Survey questionnaire administration is discussed later.*

The teacher survey instrument was modified from the 1999 and the 2001 Survey of California Teachers. Some questions were adapted to provide more useful information, and some questions were changed to reflect changes in topic areas of interest to the study. The draft 2003 survey was piloted with six 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 merging three data files from the California Basic Educational Data System (CBEDS). These three files were the 2001-02 Teacher Credential and Experience by School file; the 2001-02 Enrollment, by Grade, by School file; and the September 2002 List of California Public School Districts and Schools. Eligible schools were those identified in the CBEDS database as elementary, middle, junior high, or high schools. Approximately 2,700 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 7,563 schools in the population were stratified along three dimensions: the percentage of underprepared faculty (i.e. less than a full credential) (three ranges of percent underprepared faculty),

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, and K-12 schools were excluded from the sample. To provide a robust number of schools within each cell of this sampling frame, we selected a total of 250 schools. An approximately equal number of schools was selected from each of the three ranges for percent of underprepared faculty. Within each of these ranges, about 60% of the schools were elementary schools, 20% were middle schools, and 20% were high schools. Table A-2 shows the number of schools sampled from each cell and the total number of schools statewide that fall within that cell.

Table A-2

Distribution of School Sample, by Stratum

		Schools with less than or equal to 10% of underprepared faculty			Schools with 11% to less than or equal to 19% of underprepared faculty			Schools with 20% or more of underprepared faculty			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	17	16	16	16	16	17	17	16	17	148
	Schools in population	1,065	1,231	1,170	134	321	420	153	278	642	5,414
Middle											
	Schools sampled	5	6	6	6	6	5	5	6	6	51
	Schools in population	181	198	171	65	122	101	40	106	205	1,189
High											
	Schools sampled	6	6	5	5	6	6	5	6	6	51
	Schools in population	153	138	169	55	87	102	58	81	117	960
Column total											
	Total school sample	28	28	27	27	28	28	27	28	29	250
	Statewide population of schools	1,399	1,567	1,510	254	530	623	251	465	964	7,563

Stage 2: Teacher Sample. To build a sampling frame for teachers, we obtained teacher rosters from Market Data Retrieval Inc. (MDR), which maintains lists of teachers. The company provided names of teachers for 245 of the 250 schools selected in Stage 1. We called principals of the remaining five schools, for which teacher rosters were not available from MDR, to obtain staff lists. This process resulted in a sampling frame of teachers from 250 schools.

After obtaining rosters of teachers from the sampled schools, teacher names were pooled in each cell (27 cells in total), and the teacher sample for each cell was randomly selected from the total number of teachers in that cell by using a random number generator. Table A-3 shows the number of teachers sampled from each cell and the total number of teachers statewide within that cell. The total number of teachers—287,340—is the number of teachers working in 2002-03 in the population of 7,563 California schools eligible for study.

Table A-3

Distribution of Teacher Sample, by Stratum

		Schools with less than or equal to 10% of underprepared faculty			Schools with 11% to less than or equal to 19% of underprepared faculty			Schools with 20% or more of underprepared faculty			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	51	48	48	48	48	51	68	64	68	494
	Teachers in population	22,163	39,757	46,194	2,976	9,040	16,372	2,117	6,479	18,668	163,766
Middle											
	Teachers sampled	15	18	18	18	18	16	20	24	24	171
	Teachers in population	5,215	9,584	9,903	1,405	4,141	4,741	891	4,143	11,318	51,341
High											
	Teachers sampled	18	18	15	15	18	17	20	24	24	169
	Teachers in population	5,383	12,620	15,269	2,214	7,002	11,108	1,614	4,885	12,138	72,233
Column total											
	Total teacher sample	84	84	81	81	84	84	108	112	116	834
	Statewide population of teachers	32,761	61,961	71,366	6,595	20,183	32,221	4,622	15,507	42,124	287,340

The comparison of responses of the different types of underprepared teachers (e.g., emergency permits, pre-interns, and interns) was of special interest to this study. Because the underprepared teacher population is a small proportion of the total teacher population, the teacher sampling strategy described above was not expected to yield a sufficient number of each of the different types of underprepared teachers to make these comparisons possible. Also, it was not possible to identify teachers based on their underprepared status with the MDR teacher rosters. To augment the sample of underprepared teachers, we sent the Survey of California Teachers to all 2,532 teachers working in the 84 schools that were in the highest range of percent of underprepared faculty (20% or more underprepared faculty). Only full-time teachers working under emergency permits, pre-intern certificates, district intern certificates, or university intern credentials during the 2002-2003 school year were asked to complete this targeted survey. Table A-4 presents the number of teachers in each cell who were sent the targeted survey and the estimated number of eligible (i.e., underprepared) teachers among those teachers.

Table A-4

Distribution of Teacher Sample for Targeted Survey

		Schools with 20% or more of underprepared faculty			Row total
		District size (student enrollment)			
		<5,000	5,001-20,000	>20,000	
School level					
Elementary					
	Teachers surveyed	261	359	545	1,165
	Estimated number of eligible teachers among those surveyed*	77	117	168	362
Middle					
	Teachers surveyed	84	178	261	523
	Estimated number of eligible teachers among those surveyed	25	53	86	164
High					
	Teachers surveyed	110	319	415	844
	Estimated number of eligible teachers among those surveyed	31	86	115	232
Column total					
	Teachers surveyed	455	856	1,221	2,532
	Estimated number of eligible teachers among those surveyed	133	256	369	758

**Only full-time teachers working under emergency permits, pre-intern certificates, district intern certificates, or university intern credentials during the 2002-03 school year were eligible for the targeted survey. Because we did not know the credential status of individual teachers prior to sending the survey, we estimated the number of eligible teachers in each of the nine high emergency cells using credential status data from 2002-03 CBEDS.*

Survey Administration

Original Sample. The Survey of California Teachers questionnaire was administered to the original sample of teachers by mail from January 2003 through May 2003. In the first mailing, each teacher was sent a packet via priority mail containing an explanatory letter signed by the Task Force co-sponsors, a survey questionnaire, a postage-paid reply envelope, and a $20 check 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 35 $200 gift certificates to GiftCertificates.com. Returned survey questionnaires were logged by unique identification numbers into a response-tracking system. Two weeks after the initial mailing, a reminder postcard was sent to all non-respondents. After another two weeks, a second survey questionnaire was sent to non-respondents. With the second mailing, we offered teachers the opportunity to win a digital camera.

After the second mailing, we contacted each school site with non-respondents to identify whether the remaining non-respondents were eligible for the survey. From our phone calls, we determined that many teachers who were sent surveys were ineligible because they had retired, were not teaching at the same school, were no longer in the teaching profession, were not teaching full-time, were on leave, or were on special assignment for the year. Out of the 834 teachers in our original sample, a total of 181 teachers were deemed ineligible. We faxed letters to each of the remaining eligible non-respondents to remind them about the survey and mailed a third survey to these teachers.

Targeted Sample. The Survey of California Teachers questionnaire was administered to the targeted sample of teachers by mail from January 2003 through May 2003. The survey was identical to the survey sent to teachers in the original sample. Each teacher was sent a packet via priority mail containing an explanatory letter signed by the Task Force cosponsors, a survey questionnaire, and a postage-paid reply envelope. To encourage teachers to respond promptly, teachers who returned their completed survey questionnaires were offered a chance to win one of 20 $200 gift certificates to GiftCertificates.com. Returned survey questionnaires were logged by unique identification numbers into a response-tracking system. Two weeks after the initial mailing, a reminder postcard was sent to all non-respondents.

Calculation of Response Rate for the Survey of California Teachers

The overall response rate for the two surveys was 72.7%. The following describes the methodology used to calculate the response rate for the Survey of California Teachers.

Response Rate Calculations for Simple Random Surveys. For a simple unweighted survey, the response rate can be calculated as the ratio of the number of respondents to the number of sampled members of the population.

For example, if there are 5,000 members in the population, 100 are sampled, and 70 are respondents, then the response rate is 70/100 = 70%. A useful way to look at this calculation is to assume that the population consists of two types of people—those who will respond if asked and those who will not—and that responders to the survey provide an accurate representation of potential responders in the population. Furthermore, we assume that those who do not respond are totally different than those who do respond, so that responders to the survey cannot represent potential non-responders in the population. Using this approach, we ask ourselves to what proportion of the universe we are able to extrapolate the sample. In this case, since each person who was sampled represents 50 members in the population, then the 70 respondents can accurately represent 70 x 50 = 3,500 members of the population. Again, since 3,500/5,000 = 70%, in this simple example our response rate is 70%.

Response Rate Calculations for Simple Random Surveys with Ineligible Sample Members. In the Survey of California Teachers, we desired to survey full-time teachers only. Unfortunately, the lists from which teachers were selected contained both teachers who were working full-time and teachers who were not working full-time. Therefore, some proportion of the selected sample was actually ineligible to receive the survey. This proportion was estimated as the proportion of all respondents who stated that they were not full-time teachers divided by the total number of respondents. For example, in the low percentage of underprepared teachers stratum with elementary schools and small district size, a total of 51 teachers were randomly selected and sent the survey. There were 6 respondents who stated that they were not full-time teachers out of a total of 40 respondents. Therefore, the proportion of ineligible teachers in the sample was estimated to be 6/40 = 15%. The number of eligible teachers in the sample was estimated as (100% - 15%) x 51 = 43.4. Since there were 34 eligible respondents, the response rate was calculated as 34/43.4 = 78.3%. These strata contained 22,163 teachers, so the number who could be accurately characterized was estimated as 78.3% x 22,163 = 17,354.

For the Survey of California Teachers, there were a total of 834 sampled teachers in the original survey. Of this number, 441 respondents were eligible for the survey and 181 were ineligible. This leaves 212 sampled teachers with unknown eligibility. If we assume that all of these 212 teachers were eligible, then the response rate (ignoring weighting) would be 67.5%. However, this seems an unlikely assumption. Instead, we assumed that the proportion of eligible respondents in our remaining sample was the same as in our responding sample. Since 441/(441 + 212) = 70.9% were eligible in the responding sample, we also assumed that 70.9% x 212 = 150.3 of these were eligible from among the 212. Therefore, the response rate with this adjustment is 441/(441 + 150.3) = 74.6%.

Response Rate Calculations in the 18 Strata of the Survey of California Teachers Where the Percentage of Underprepared Teachers is Less Than 20%. Consider the situation where there are two strata in a population. Stratum A has 500 members and stratum B has 50,000 members. In each stratum we sample 100 members. The response rate for the survey in stratum A is 10% and in stratum B is 90%. A simple but erroneous formula for calculating the overall response rate would be (10 + 90)/(100 + 100) = 50%. However, this ignores the fact that we really have an excellent response rate for stratum B, and that stratum dominates the total population. Certainly we know much more about the population than we would if we had obtained a 50% response rate for each of these two surveys. A correct approach is to calculate the number of population members from each stratum that our survey can accurately represent. We can accurately represent 50 members of stratum A (i.e., 10% of the population in stratum A) and 45,000 members in stratum B (i.e. 90% of the population in stratum B). In total we can accurately represent 45,050 of 50,500 in the population, or about 89.2% of the population, and this is our overall response rate. Notice that if the response rate for the survey in stratum A had been 90% and the response rate for the survey in stratum B had been 10%, then our overall response rate would have been (90% x 500 + 10% x 50,000)/(500 + 50,000) = 10.8%.

The above calculations extend easily to multiple strata. In the Survey of California Teachers, we have a sample drawn from 18 different strata where the percentage of underprepared teachers is less than 20%. In each stratum we can calculate the number of population members that can be represented by the respondents (again assuming that non-respondents are completely different and cannot be represented by respondents) and sum them together. If we divide by the total number in the population of these 18 strata, we obtain an estimate of the response rate for these strata.

Table A-5 shows the number of respondents who can be accurately represented in the 18 strata of the Survey of California Teachers where the percentage of underprepared teachers is less than 20%. In this table, the range for low percent underprepared is 10% or fewer underprepared teachers and the range for medium percent underprepared is 11% to 19% underprepared; the small district size range is 1 to 5,000, the medium range is 5,001 to 20,000, and the large range is 20,001 or greater. Within a stratum, the response rate is the number of respondents divided by the number of teachers who were selected and eligible for the survey (i.e., the number selected less the number who responded indicating that they were no longer full-time teachers).

Table A-5

Response Rate Calculations in Low and Medium Percentage Underprepared Strata

Percent underprepared	School level	District size	Teachers in population	Response rate of random survey	Number accurately represented by respondents
Low	Elem	Small	22,163	78.4%	17,383
Low	Elem	Medium	39,757	72.9%	28,989
Low	Elem	Large	46,194	75.0%	34,646
Low	Middle	Small	5,215	93.3%	4,867
Low	Middle	Medium	9,584	72.2%	6,922
Low	Middle	Large	9,903	77.8%	7,702
Low	High	Small	5,383	66.7%	3,589
Low	High	Medium	12,620	66.7%	8,413
Low	High	Large	15,269	93.3%	14,251
Medium	Elem	Small	2,976	79.2%	2,356
Medium	Elem	Medium	9,040	83.3%	7,533
Medium	Elem	Large	16,372	80.4%	13,162
Medium	Middle	Small	1,405	77.8%	1,093
Medium	Middle	Medium	4,141	77.8%	3,221
Medium	Middle	Large	4,741	64.3%	3,556
Medium	High	Small	2,214	80.0%	1,771
Medium	High	Medium	7,002	83.3%	5,835
Medium	High	Large	11,108	64.7%	7,188
Total			225,087		172,476

For these 18 strata, survey respondents accurately represent 172,476 of the 225,087 teachers, and therefore the response rate is 76.6%.

Response Rate Calculations When the Percentage of Underprepared Teachers is 20% or More. Before considering the remaining 9 strata of the Survey of California Teachers, consider a hypothetical stratum consisting of 10,000 teachers. Suppose that we conduct two surveys of these teachers. Each survey consists of a

random sample of 500 teachers, and they are identical except that one survey has a $5 incentive fee and the other does not. The first survey has 300 respondents and the second has 100 respondents. To estimate the population, we combine the 400 respondents and weight them equally. What is the appropriate response rate? It is not 400/1,000 = 40%. To see this, suppose that instead of 100 respondents, our second survey had actually received only one response. If the above formula was correct, then this would reduce our response rate to 301/1,000 = 30.1%. However, removing that one respondent would boost the response rate to 300/500 = 60%. Adding or subtracting a single respondent to a pool of 300 respondents cannot possibly alter the percentage of the population that can be accurately represented by 30%. The correct formula (assuming that all respondents are equally weighted, as they should be here) is (300/400) x 60% + (100/400) x 20% = 50%. That is, since 300/400 = 75% of the respondents come from a survey with a response rate of 60%, and 100/400 = 25% of the combined sample comes from a survey with a response rate of 20%, the combined response rate is 75% x 60% + 25% x 20% = 50%. (Note that if the survey respondents had not been equally weighted then instead of 100, 300, and 400 in the above formula, we would have substituted the combined weights of the 100, 300, and 400 respondents.)

In the remaining nine strata of the Survey of California Teachers (where the percentage of underprepared teachers is 20% or more) the surveying approach is slightly more complicated than described above. Consider a single stratum consisting of 10,000 teachers. Suppose that state records show that 7,000 of these teachers are fully credentialed and 3,000 are underprepared, but we do not have access to the identities of these teachers. We conduct two surveys of this stratum. The first survey goes to 500 randomly selected teachers and all of these teachers are invited to return the survey. The second survey goes to a different 400 randomly selected teachers, with instructions that only the underprepared teachers should fill out the survey and return it. We obtain 300 responses to the first survey—with 200 fully credentialed respondents and 100 underprepared respondents. (To simplify this example, we assume that no respondents state that they are not full-time teachers and are therefore ineligible for the survey). From the second survey we obtain responses from 70 underprepared respondents. With respect to the first survey, we assume that since 70% of the population is fully credentialed, and we selected at random, that we selected 70% x 500 = 350 fully credentialed teachers, of which 200 responded. Therefore, the response rate is 200/350 = 57.1%, and we can accurately represent 7,000 x 57.1% = 4,000 fully credentialed teachers.

The calculations for the underprepared teachers are more complex, because we are using respondents from two surveys to represent them. The first survey is expected to have sampled 30% x 500 = 150 underprepared teachers, and therefore its response rate is 100/150 = 66.7%. The second survey is expected to have sampled 30% x 400 = 120 underprepared teachers, and therefore its response rate is 70/120 = 58.3%. If we represent the population using all of these 100 + 70 respondents, and they are equally weighted, then the overall response rate is (100/170) x 66.7% +

(70/170) x 58.3% = 63.2%. This means that we can represent 3,000 x 63.2% = 1,896 underprepared teachers.

For the Survey of California Teachers we used the above method to calculate the number of represented teachers in the nine strata with two surveys. Table A-6 shows the number of fully credentialed teachers in the population, the number of underprepared teachers in the population, the fully credentialed response rate of the original survey (i.e., the number of fully credentialed respondents divided by the expected number of fully credentialed teachers in the population), the underprepared response rate of the original survey (i.e., the number of underprepared respondents divided by the expected number of underprepared teachers in the population), the response rate of the targeted survey (i.e., number of underprepared respondents divided by the expected number of underprepared teachers in the sample for the targeted survey), the number of fully credentialed teachers who can be accurately represented by respondents, and the number of underprepared teachers who can be accurately represented by respondents.

Table A-6

Calculation of the Response Rate in High Underprepared Strata

District level	District size	Fully credentialed teachers in population	Underprepared teachers in population	Fully credentialed response rate of original survey	Underprepared response rate of original survey	Response rate of targeted survey	Fully credentialed teachers accurately represented	Underprepared teachers accurately represented
Elem	Small	1,489	628	85.5%	37.6%	7.7%	1,274	134
Elem	Medium	4,370	2,109	60.8%	69.3%	12.8%	2,657	775
Elem	Large	12,912	5,756	69.8%	46.4%	11.3%	9,015	1,249
Middle	Small	631	260	91.8%	0.0%	8.2%	579	21
Middle	Medium	2,908	1,235	90.4%	38.7%	9.4%	2,629	220
Middle	Large	7,610	3,708	47.0%	41.3%	18.7%	3,576	826
High	Small	1,160	454	83.5%	26.7%	12.9%	968	71
High	Medium	3,576	1,309	78.8%	95.7%	9.4%	2,818	499
High	Large	8,776	3,362	99.5%	26.0%	12.2%	8,736	440
Total		43,432	18,821				32,252	4,235

In Table A-6, we note that the response rate for the underprepared teachers in the random survey varies significantly from stratum to stratum. This is primarily a consequence of the small sample sizes involved.

In the high underprepared strata the response rate for the fully credentialed teachers is 32,252/43,432 = 74.2%, the response rate for the not fully credentialed teachers is 4,235/18,821 = 22.5%, and the overall response rate is (32,252 + 4,235)/(43,432 + 18,821) = 58.6%

Calculating the Overall Response Rate. We combined these values with the number of represented teachers in the remaining 18 strata, and divided by the total number of teachers in the population, to arrive at an overall response rate. The overall response rate is (172,476 + 36,489)/(225,087 + 62,253) = 208,965/287,340 = 72.7%. See Table A-7 for a summary of the response rates by stratum, including the combined response rates for the original and targeted surveys in the high percentage underprepared strata.

Table A-7

Teacher Survey Response Rates, by Stratum

		Schools with less than or equal to 10% of underprepared faculty			Schools with 11% to less than or equal to 19% of underprepared faculty			Schools with 20% or more of underprepared faculty			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	34	23	22	23	29	32	39	47	56	305
	Response rate*	78%	73%	75%	79%	83%	80%	67%	53%%	55%	73%
Middle											
	Respondents	14	9	11	11	9	10	10	18	28	120
	Response rate	93%	72%	78%	78%	78%	75%	67%	69%	39%	69%
High											
	Respondents	4	7	7	9	12	6	14	21	25	105
	Response rate	67%	67%	93%	80%	83%	65%	64%	68%	76%	76%
Column total											
	Respondents	52	39	40	43	50	48	63	86	109	530
	Response rate	79%	72%	79%	79%	82%	74%	66%	62%	57%	73%

**Response rates were calculated using the methodology described in the previous pages.*

Survey Analysis

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 could not be treated equally if the sample was to represent the population of California teachers. Instead, teachers' responses were adjusted to reflect their chance of participating in the study.[1]

All survey analyses were conducted with the statistical software packages SAS and SUDAAN. SAS was used to obtain unweighted counts. SUDAAN, a package capable of analyzing data gathered in surveys that use complex sampling methods, was used to obtain weighted point estimates and precise test statistics (e.g., chi-square) and variance estimates (e.g., standard error of the mean). When using a stratified sampling design, the variances within each stratum are more homogenous than those between strata, which can lead to biased significance tests and variance estimates. SUDAAN permits adjustments for single-stage and multi-stage stratification and clustering, giving precise significance tests or variance estimates. 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-8.
- Chi-square tests and standard errors were used to determine statistical differences in the distributions of subgroups on categorical variables.
- For analyses of continuous variables, F-tests and standard errors of the mean were used to assess the mean differences among subgroups.
- The longitudinal analyses consisted of comparing similar items across the three cross-sectional surveys of California teachers conducted by SRI in 1999, 2001, and 2003. We examined the response distribution for subgroups of teachers defined by key variables. Chi-square tests and standard errors were used to determine statistical differences in the distribution of subgroups on categorical variables. In addition, for the analyses of continuous variables, standard errors of the mean and F-tests were used to assess the mean differences among subgroups.

[1] 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 non-response 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.

Table A-8

Selected Key Independent Variables for Survey of Teachers

Independent variable	Categories
Percentage of underprepared teachers in respondent's school	≤ 10% ≥ 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 ≥ 11 years

Case Studies of Teachers: A Bottom-Up Approach

Our past case studies for *Teaching and California's Future* prioritized the dynamics of teacher development at the system level over the learning experiences of teachers inside and outside of their classrooms. This year's case studies, in contrast, explored what teachers with different preparation backgrounds and facing different challenges need to be effective educators, how the local school and district policies and circumstances assist in or complicate meeting those needs, and how well state policies designed to support teachers meet the day-to-day needs of teachers.

During this year's qualitative data collection effort, individual teachers were the initial unit of analysis. Our research team followed the subjects closely to better understand their teaching and learning experiences and to examine the system of teacher development from their perspectives. We designed this teacher-centered examination to help policy-makers better understand what programs work well, what policies need to be reconsidered, and to offer some reasons why these initiatives help or hinder teachers.

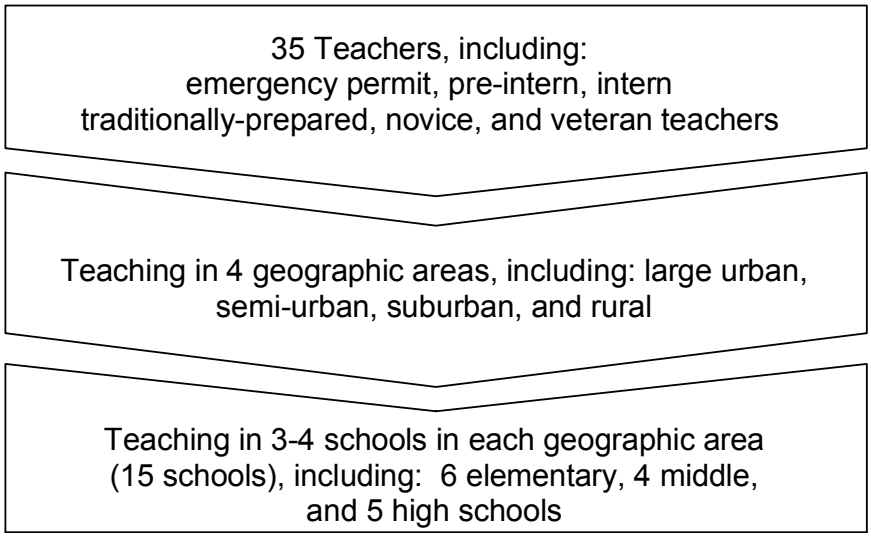
Sample of Districts/Geographical Areas. We selected our four case study sites to reflect the range of urbanicity within the state: urban, semi-urban, suburban, and rural. In three of the four geographic areas we selected two districts to ensure coverage of grades K-12. The large urban area was represented by a single district. The suburban, semi-urban, and rural areas, meanwhile, included more than one district because the elementary and high school districts were not unified. We also chose districts that vary by the percentage of underprepared teachers they employ, and that reflect the variety of public school environments in California. Districts were selected on the basis of recommendations from the field and background screening by telephone.

Sample of Schools and Teachers. For the large urban and suburban areas, we selected two elementary schools, one middle school, and one high school. In the rural and semi-urban areas, we selected one elementary, one middle, 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. The schools in the urban area did not feed into each other. Some of the schools in the suburban, semi-rural, and rural districts did feed into each other.

Within each school, we selected two to three teachers. 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 as well as special education at the middle school and high school levels. Within this mix of beginning and veteran teachers, we included fully credentialed teachers, university and district interns, emergency permit teachers, and pre-interns. Exhibit A-9 illustrates the basic design of the case study sample.

Exhibit A-1

Overview of Case Study Design



This sampling strategy allowed us to examine the full range of teachers at different points in their careers while concentrating on teachers who entered the profession without first completing a preparation program. Our approach provided a sample size of 15 schools and 35 target teachers. For their participation, the teachers targeted for intensive study received a stipend. Table A-10 displays the distribution of the teachers we targeted for intensive study, their district type, and school level.

Table A-9

District and Teacher Sampling for Case Studies

District type	Grade span/school level	Number of teachers
Large urban	Elementary	2
	Elementary	3
	Middle	2
	High	3
Semi-urban	Elementary	2
	Middle	2
	High	6
Suburban	Elementary	2
	Elementary	2
	Middle	2
	High	3
Rural	Elementary	2
	Middle	2
	High	2
Totals	Elementary (6)	13
	Middle (4)	8
	High (5)	14
Total number of teachers		35

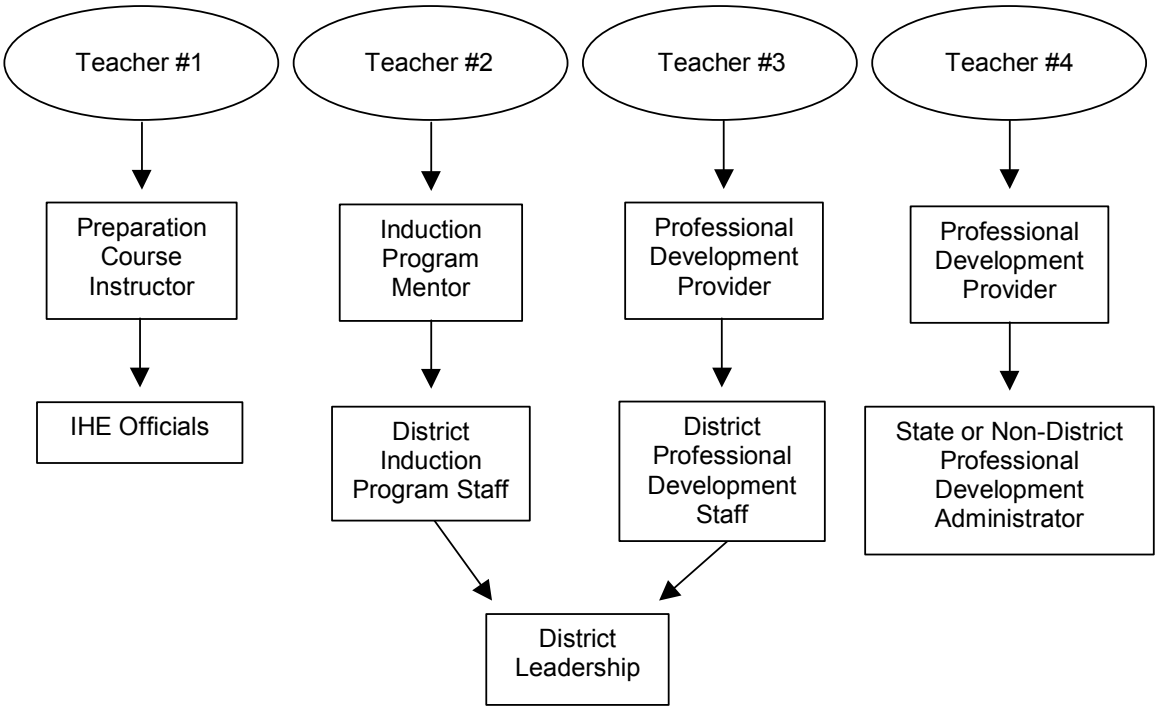
Data Collection Methods. We interviewed each target teacher, observed their classrooms, and attended significant preparation, induction, and professional development activities with each teacher one to three times throughout the 2002-03 school year. At each of the 15 schools, we interviewed two to three target teachers. In all, we interviewed 35 teachers in our efforts to understand the school's impact on the learning of our targeted teachers.

The research teams employed a variety of tools during the data collection efforts. We developed and used semi-structured interview guides for teachers and administrators at the schools. In addition, research teams used uniform "walk-through" guides to gather data on working conditions at each school site as well as teacher observation guides to evaluate instructional practices and environments. Target teachers also submitted bi-weekly logs that described their professional development activities and asked them to answer a series of reflective questions about the most useful professional development activity they participated in each period. In some cases, too, we engaged in regular (weekly or bi-weekly) email conversations with certain teachers. These communications focused on the teachers' learning opportunities, the impact of those learning opportunities on their instructional practices, and the teachers' perceived needs for additional assistance.

Our bottom-up approach also led to a series of interviews with a wide variety of university, district, and non-district officials. For the sources of teacher learning, including preparation classes, induction program activities, or professional development opportunities identified by the target teachers, we interviewed those individuals responsible for administering and delivering them. This included site administrators, instructional coaches, teacher colleagues, and university faculty and administrators. Exhibit A-12 further illustrates our approach to understanding the system of teacher development.

Exhibit A-2

Examining the System of Teacher Development from the Perspective of the Teacher



These data further enhanced our understanding of the system of teacher development. Here, also, we employed semi-structured interview guides linked to the study's overarching research questions. This aspect of the data collection involved 124 interviews with 52 teacher colleagues (including coaches and support providers), 19 site administrators, 45 county and district officials, and 3 university faculty and staff members. Table A-12 lists the types of interviewees.

Table A-10

Case Study Interviewees

Level	Types of interviewees
School	▪ Teachers ▪ Principals ▪ Specialists with teacher support roles (e.g., coaches, support providers, reading specialists)
District	▪ Superintendents ▪ Curriculum specialists, staff developers, professional development coordinators ▪ Recruiting and hiring managers ▪ Professional development coordinators ▪ BTSA coordinators
County	▪ Pre-intern/intern coordinators ▪ BTSA directors ▪ Superintendents
University	▪ Administrators ▪ Faculty

Case Study Analysis. Throughout the course of our data collection, the entire research team assembled for bi-weekly meetings to discuss emerging themes. Site teams also met periodically to discuss issues specific to their sites. Following the completion of our final site visits, we used detailed case study debriefing forms to guide the preparation of internal case study reports. Each site team analyzed the data collected for its own site and synthesized the data in these reports. After these write-ups were completed, one analytic meeting with all site teams was conducted to discuss findings within and across cases, and to develop cross-site themes for each major category of teacher development (preparation, induction, professional development, etc.). Several meetings with smaller groups of site visitors were held to continue to develop the cross-site themes. We analyzed case study data according to the various strata by which we sampled (e.g., percentage of underprepared faculty, urbanicity), as well as other variables that emerged as salient, such as school level.

Integrated Analysis. Results of the teacher 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. Conflicting or contradictory survey and case study data were examined to identify possible reasons for the discrepancy.

Appendix B. Technical Information for Figures and Tables in Chapters 2-5

This appendix provides technical information for figures and tables throughout this report. Please note that percentages reported from SRI surveys are based on weighted data.

Chapter 2 – Supply and Demand

Figure 2-1
California K-12 Teacher Workforce, 1992-93 to 2002-03

For the years 1992-93 to 1996-97, total workforce numbers are from the California Basic Educational Data System (CBEDS) historical files. Data for 1997-98 through 2002-03 are taken from DataQuest.

Figure 2-2
Number of Underprepared Teachers in California, 1997-98 to 2002-03

The number of underprepared teachers is calculated using DataQuest reports by dividing the variable "FULL" (total number of teachers with full credentials) by the total number of teachers in the workforce.

Figure 2-4
Number of First-Year Teachers, by Credential Status, 1997-98 to 2002-03

Underprepared first-year teachers were identified as those who responded on the Personnel Assignment Information Form (PAIF) that they did not hold a "full credential" (defined by the California Department of Education as a preliminary, professional clear, or life credential). All subsequent analyses of "underprepared" teachers identify these teachers as those who responded on the PAIF that they did not hold a full credential.

Figure 2-5
Number of Underprepared Teachers, by Participation in Intern and Pre-Intern Programs, 1997-98 to 2002-03

The total number of underprepared teachers comes from the Personnel Assignment Information Form (PAIF) from the California Basic Education Data System (CBEDS). The number of pre-intern and intern participants come from special data requests from the California Commission on Teacher Credentialing.

Figure 2-7
Distribution of Schools, by School-Level Percentage of Underprepared Faculty, 2002-03

The data for 2002-03 include all schools that are not adult, vocational, state special schools, or other alternative schools to provide a statewide portrait of the distribution of underprepared teachers.

Figure 2-8
Distribution of Underprepared Teachers, by School-Level Percentage of Minority Students, 1997-98 to 2002-03

The percentages given for 1997-98 are not comparable to those given in Figure 3-4 of *The Status of the Teaching Profession 1999*, which included emergency permits but not other types of underprepared teachers.

The number of schools included in these analyses vary for each year because of varying numbers of schools and the varying completeness of the data sets. The table below provides the numbers of schools included in each category. All non-traditional schools, such as adult, vocational, state special schools, or other alternative schools were dropped from this analysis.

Number of Schools, by Student Minority Category in Distribution Analysis

Percent of non-white student population	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
0-30% minority	1,828	1,704	1,866	1,744	1,673	1,583
31-60% minority	1,874	1,751	1,592	1,981	1,969	1,992
61-90% minority	2,007	1,945	1,563	2,232	2,318	2,368
91-100% minority	1,322	1,347	1,689	1,566	1,673	1,780
Total	7,031	6,747	6,710	7,523	7,633	7,723

Figure 2-9
Distribution of Underprepared Teachers, by School-Level API Score, 1999-2000 to 2002-03

The 2000-01 data does not match that reported in *The Status of the Teaching Profession 2001*. At the time of print, 2000-01 API Base data was not available so the 2000-01 data in the 2001 report was an analysis of the 2000-01 percent underprepared teacher by 1999-2000 API scores. The 2001 API Base data is now available and the analysis was rerun for the 2003 report.

Table 2-1
Percentage of Underprepared Teachers, by Assignment, 1997-98 to 2002-03

The percentage of underprepared teachers is calculated as a percentage of full-time teachers by assignment who report not having a full credential (i.e. preliminary, professional clear, or life credential). Teachers may report more than one assignment. Teachers who reported not holding any type of credential, permit, or certificate were dropped from this analysis.

The percentages for 2000-01 do not match those reported in *The Status of the Teaching Profession 2001*. Unlike the analysis done for the 2001 report, teachers were dropped from the analyses for the 2003 report if the did not report holding any type of credential. Teachers were also dropped from the secondary subject area analysis if they only reported teaching a particular subject area but did not report that they were a secondary teacher.

Chapter 3 – Teacher Preparation

Figure 3-3
Differences in Student Teaching Activities between Traditional and Nontraditional Routes

The following table presents the percentages and standard errors for the responses of all teachers who completed the survey for the year 2002-03.

		Credential Route			X^2	df	p-value
Please indicate whether each statement describes your student teaching experience. *During my student teaching experience…*		All	Percent of teachers who went through a traditional California preparation program	Percent of teachers who went through a non-traditional California preparation program			
I collaborated with my master/supervising teacher to develop lesson plans.	%	78	85	52	13.58	1	0.00
	SE	3.08	3.15	7.41			
	N_W*	*222,843*	*175,065*	*47,778*			
	N_{UW}*	*348*	*242*	*106*			
I observed my master/supervising teacher teach.	%	82	90	51	20.01	1	0.00
	SE	2.61	2.26	7.41			
	N_W	*225,028*	*177,120*	*47,908*			
	N_{UW}	*352*	*245*	*107*			

* N_W = *Weighted N;* N_U= *Unweighted N.*

Figure 3-4
Why Did You Teach Prior to Earning a Credential?

The following table presents the percentages and standard errors for the responses of all teachers who did not complete student teaching and were not recommended for a credential prior to beginning their first paid full-time teaching position for the year 2002-03.

How important was each of the following in your decision to teach before or while attending a teacher preparation program?		Percent of teachers reporting "Very"*	Percent of teachers reporting "Moderately"*	*Weighted N*	*Unweighted N*
I didn't want to give up income while attending a preparation program.	%	45	21	*83,063*	*232*
	SE	4.90	3.89		
I have taught in some capacity before and felt prepared.	%	27	35	*81,405*	*230*
	SE	4.54	4.59		
I couldn't afford the tuition and expenses for a full-time preparation program.	%	29	25	*82,192*	*229*
	SE	4.42	4.76		
I intended on being prepared first, but a teaching opportunity came up.	%	22	26	*82,902*	*231*
	SE	3.74	4.33		
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	%	2	21	*82,624*	*230*
	SE	0.74	4.28		

**Alternative response choices were "Not at all" and "A little."*

Figure 3-5
Perceived Effectiveness of Teacher Preparation

The following table presents the percentages and standard errors for the responses of all teachers who completed the survey for the year 2002-03.

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 of teachers reporting "A lot"*	Percent of teachers reporting "Adequately"*	*Weighted N*	*Unweighted N*
Gave me knowledge of and practice in basic instructional techniques appropriate for the subject matter I am credentialed or being credentialed to teach.	%	37	41	*283,401*	*502*
	SE	3.03	3.03		
Reinforced my knowledge of the subject matter I am credentialed or being credentialed to teach.	%	27	36	*281,484*	*502*
	SE	2.9	3.13		
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).	%	20	40	*283,091*	*503*
	SE	2.35	3.07		
Taught me how to use student assessment data to plan instruction.	%	14	34	*279,504*	*498*
	SE	2.13	3.12		
Prepared me to adapt instruction for students with Individualized Education Plans.	%	17	21	*279,685*	*497*
	SE	2.41	2.63		

**Alternative response choices were "Not at all" and "A little. "*

Figure 4-2
BTSA Participation, by Percentage of Underprepared Teachers in a School

The following table presents the percentages and standard errors for the responses of teachers with 5 or fewer years of classroom teaching experience who reported receiving professional support during their first and/or second year of teaching.

BTSA participation		All	Percent of underprepared teachers in a school		X^2	df	p-value
			Fewer than 20 percent	20 percent or more			
Participated in BTSA	%	51	66	26	12.68	1	0.00
	SE	6.25	8.59	5.15			
Did not participate in BTSA	%	49	34	74			
	SE	6.25	8.59	5.15			
Weighted N		*55,681*	*34,640*	*21,041*			
Unweighted N		*149*	*47*	*102*			

Figure 4-4
Induction Support Activities Provided to Beginning Teachers

The following table presents the percentages and standard errors for the responses of teachers with 5 or fewer years of classroom teaching experience who reported being formally assigned a mentor during their first or second year of teaching.

During your 1st and/or 2nd year of teaching, did you receive any of the following types of professional support at your school?	Percent of teachers	SE
Release time to observe other teachers	74	4.79
Observation of your class by non-administrators (e.g., peer, mentor, support provider)	74	5.14
Formal assignment of an experienced teacher to provide mentorship (e.g., mentor, support provider)	73	5.69
School/district orientation or workshops for new teachers	67	6.02
Regular meetings between you and other beginning teachers	62	5.46
Individualized Induction Plan (IIP) to fulfill BTSA/CFASST requirements	51	5.94
Coursework on topics such as teaching methods, lesson planning, or discipline, paid for by the school district	37	5.94
Money to buy materials, exceeding the normal budget allotment for other teachers at your school	36	6.23
Regular meetings between you and the principal	28	5.84
Teacher portfolio development	15	4.84
Reduced duties (e.g., an extra planning period, no committee assignments)	13	3.33

Weighted N = 60,738.

Unweighted N = 160.

Figure 4-5
Teachers Reporting Monthly/Weekly Mentor Activities

The following table presents the percentages and standard errors for the responses of teachers with 5 or fewer years of classroom teaching experience who reported receiving professional support during their first and/or second year of teaching.

How often did your mentor engage in this activity with you?		Percent of teachers reporting "About monthly" or "At least weekly"*	*Weighted N*	*Unweighted N*
Prepared/sent me materials	%	42	*50,481*	*135*
	SE	6.60		
Talked with me about the strengths and/or needs of specific students	%	37	*50,481*	*135*
	SE	6.63		
Visited my classroom during instruction time	%	37	*50,481*	*135*
	SE	6.07		
Talked with me about a classroom observation	%	31	*50,481*	*135*
	SE	5.79		
Planned lessons with me	%	23	*50,481*	*135*
	SE	5.45		
Conducted formal observations in my classroom	%	22	*47,869*	*133*
	SE	4.71		
Invited me into his/her classroom to observe	%	21	*49,491*	*133*
	SE	5.94		
Demonstrated lessons for me in the classroom	%	9	*50,481*	*135*
	SE	2.85		

**Alternative response choices were "Never," "Once," or "A Few Times."*

Figure 4-6
Teachers Reporting Mentor Support Activities as Very Valuable, by Frequency of Activity

The following table presents the percentages and standard errors for the responses of teachers with 5 or fewer years of classroom teaching experience who reported being formally assigned a mentor during their first or second year of teaching and engaged in a support activity at least once with their mentor.

			Frequency of mentor interaction				
How valuable was this activity for your professional development?		All	Percent of teachers who engaged in the activity less than monthly describing the support as "Very valuable"**	Percent of teachers who engaged in the activity at least monthly describing the support as "Very valuable"**	X^2	df	p-value
Conducted formal observations in my classroom	%	47	36	74	5.76	1	0.02
	SE	8.29	10.18	9.87			
	N_W*	*35,373*	*24,899*	*10,474*			
	N_U	*83*	*57*	*26*			
Talked with me about a classroom observation	%	62	49	87	8.63	1	0.00
	SE	7.30	9.86	5.96			
	N_W	*45,331*	*29,666*	*15,666*			
	N_U	*105*	*66*	*41*			
Helped me develop a professional growth plan	%	47	26	65	5.02	1	0.03
	SE	8.67	8.22	12.85			
	N_W	*30,476*	*14,500*	*15,976*			
	N_U	*72*	*45*	*27*			
Demonstrated lessons for me in the classroom	%	57	50	89	4.12	1	0.04
	SE	10.44	12.10	10.23			
	N_W	*24,629*	*20,252*	*4,376*			
	N_U	*54*	*43*	*11*			
Prepared/sent me materials	%	57	24	90	21.21	1	0.00
	SE	7.47	6.38	4.60			
	N_W	*41,873*	*20,650*	*21,223*			
	N_U	*103*	*61*	*42*			
Planned lessons with me	%	49	28	85	9.49	1	0.00
	SE	9.76	10.89	7.52			
	N_W	*31,041*	*19,418*	*11,623*			
	N_U	*60*	*35*	*25*			
Talked with me about the strengths and/or needs of specific students	%	67	48	87	8.05	1	0.00
	SE	7.17	11.88	5.39			
	N_W	*37,320*	*19,137*	*18,183*			
	N_U	*82*	*42*	*40*			

* *N_W = Weighted N; N_U = Unweighted N.*

** *Alternative response choices were "Not valuable" or "Somewhat valuable."*

Figure 4-7
Teachers Reporting They Received Various Types of Mentor Support at Least Once, by BTSA Participation

The following table presents the percentages and standard errors for the responses of teachers with 5 or fewer years of classroom teaching experience who reported being formally assigned a mentor during their first or second year of teaching.

How often did your mentor engage this activity with you?		All	BTSA participation		X^2	df	p-value
			Percent of BTSA teachers reporting at least once**	Percent of non-BTSA teachers reporting at least once**			
Visited my classroom during instruction time	%	91	98	80	9.41	1	0.00
	SE	2.47	1.03	5.56			
	N_W*	*46,270*	*28,257*	*18,013*			
	N_U	*126*	*57*	*69*			
Conducted formal observations in my classroom	%	76	85	63	4.25	1	0.04
	SE	5.31	7.15	7.41			
	N_W	*43,659*	*26,158*	*17,501*			
	N_U	*124*	*56*	*68*			
Talked with me about a classroom observation	%	93	99	84	11.10	1	0.00
	SE	1.92	0.52	4.59			
	N_W	*46,270*	*28,257*	*18,013*			
	N_U	*126*	*57*	*69*			
Talked with me about the strengths and/or needs of specific students	%	76	86	59	6.44	1	0.01
	SE	5.46	7.45	7.41			
	N_W	*46,270*	*28,257*	*18,013*			
	N_U	*126*	*57*	*69*			
Planned lessons with me	%	62	77	38	10.79	1	0.00
	SE	5.88	6.18	7.44			
	N_W	*46,270*	*28,257*	*18,013*			
	N_U	*126*	*57*	*69*			

* *N_W = Weighted N; N_U = Unweighted N.*

** *Includes teachers who responded "Once," "A few times," "About monthly," or "At least weekly." The alternative response choice was "Never."*

Figure 4-9
Contributions of Induction Support Activities to Teaching

The following table presents the percentages and standard errors for the responses of teachers with 5 or fewer years of classroom teaching experience who reported receiving 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 of teachers reporting "A lot"*	*Weighted N*	*Unweighted N*
Helped me understand the way my school/district worked (e.g., administration, processes, resources)	%	58	*60,086*	*159*
	SE	6.10		
Improved my classroom management, allowing me to try new instructional activities	%	57	*59,792*	*157*
	SE	6.27		
Increased my effectiveness at promoting student learning	%	53	*59,794*	*157*
	SE	6.18		
Increased my knowledge of instructional techniques appropriate for the subject matter I taught	%	52	*59,873*	*158*
	SE	6.37		
Improved my skills to meet instructional needs of the student population at this school (e.g., English language learners or students from diverse cultural	%	44	*59,873*	*158*
	SE	6.49		
Increased my knowledge of assessment techniques appropriate for the subject matter I taught	%	43	*57,122*	*156*
	SE	6.38		
Deepened my grasp of the subject matter I taught	%	34	*59,873*	*158*
	SE	5.69		
Increased my ability to adapt instruction for students with Individualized Education Plans	%	31	*60,086*	*159*
	SE	6.08		

**Alternative response choices were "Not at all," "A Little," or "Somewhat."*

Chapter 5 – Professional Development

Figure 5-2
Professional Development Activities Reported by Teachers

The following table presents the percentages and standard errors for the responses of teachers with at least 1 year of teaching experience for the year 2001-02.

Thinking back to last school year (2001-02), in which of the following activities related to teaching did you participate (as a participant, not as an instructor or facilitator)?		Percent of teachers	*Weighted N*	*Unweighted N*
Workshops and training offered by your school or district	%	96	*264,795*	*474*
	SE	1.25		
Regularly-scheduled collaboration with other teachers	%	79	*266,752*	*472*
	SE	2.61		
Independent professional reading, not necessarily focused on a specific topic	%	72	*258,460*	*463*
	SE	2.96		
School or district committee on a topic related to curriculum and instruction, including standards, curriculum, and textbook selection committees	%	72	*258,754*	*464*
	SE	2.96		
Professional development related to state- or district-adopted textbooks or instructional materials to be used in your classroom	%	61	*263,746*	*467*
	SE	3.13		
Activities such as conferences or working groups, sponsored by subject matter professional associations (e.g., National Council of Teachers of English.)	%	42	*260,683*	*465*
	SE	3.37		
Privately sponsored professional development (e.g., speaker, activities provided by a local museum, aquarium)	%	38	*259,793*	*462*
	SE	3.37		
Individual or collaborative research on a topic of interest to you professionally	%	38	*255,287*	*457*
	SE	3.37		
University extension or adult education courses, excluding alternative certification programs	%	38	*258,390*	*462*
	SE	3.24		
Activities sponsored by one or more California Subject Matter Projects (e.g., Writing Project)	%	28	*254,032*	*460*
	SE	2.98		
Internet-based professional development (e.g., online courses or teacher networks)	%	27	*255,488*	*458*
	SE	3		
A summer institute with follow-up activities focused on mathematics or language arts (e.g., California Professional Development Institute, Reading Results)	%	27	*253,126*	*457*
	SE	2.95		
Graduate courses in your academic subject area(s) (e.g., mathematics, science)	%	24	*253,915*	*453*
	SE	2.9		

Figure 5-3
Prevalence of Certain Characteristics of Professional Development, 1997-98, 1999-2000, and 2001-02

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, 1999-2000, and 2001-02.

		Academic Year				X^2	df	p-value
Considering all of the professional development activities in which you participated during the 2001-02 school year, please indicate the extent to which you agree with the following statements. *In general, my professional development activities…*		All	Percent of teachers reporting in 1997-1998**	Percent of teachers reporting in 1999-2000**	Percent of teachers reporting in 2001-2002**			
Promoted collaboration among teachers.	%	50	46	46	55	6.54	2	0.04
	SE	1.65	2.37	2.38	3.24			
	N_W*	*692,578*	*194,072*	*221,071*	*277,436*			
	N_U*	*1679*	*618*	*574*	*487*			
Focused on subject matter content.	%	47	41	42	56	15.59	2	0.00
	SE	1.65	2.35	2.35	3.20			
	N_W	*687,659*	*193,495*	*220,296*	*273,867*			
	N_U	*1670*	*616*	*572*	*482*			
Recognized and built on individual teachers' knowledge and experience.	%	41	36	36	47	8.88	2	0.01
	SE	1.65	2.32	2.32	3.27			
	N_W	*689,808*	*194,332*	*219,714*	*275,762*			
	N_U	*1678*	*618*	*573*	*487*			
Met the needs I have in my current teaching assignment(s).	%	34	26	31	42	16.37	2	0.00
	SE	1.62	2.15	2.23	3.26			
	N_W	*689,816*	*193,518*	*220,903*	*275,395*			
	N_U	*1674*	*616*	*573*	*485*			
Were a series of single events with little or no follow-up.	%	37	42	39	31	7.83	2	0.02
	SE	1.56	2.32	2.35	2.96			
	N_W	*689,239*	*193,574*	*220,716*	*274,948*			
	N_U	*1673*	*616*	*573*	*484*			

N_W = Weighted N; `N_U= Unweighted N.

***Percent of teachers with at least one year of experience reporting "Often/Very Often." Alternative response choices were "Never", "Seldom", and "Sometimes."*

Figure 5-4
Teacher Engagement in Professional Collaborative Activities

The following table presents the percentages and standard errors for the responses of teachers with at least 1 year of teaching experience for the year 2001-02.

How often do you do each of the following activities with other teachers in this school?		Percent of teachers reporting "At least weekly"*	Percent of teachers reporting "At least monthly"*	*Weighted N*	*Unweighted N*
Receive in-class coaching or mentoring	%	2	4	*283,323*	*507*
	SE	0.51	1.08		
Observe each other's classrooms to offer feedback and/or learn ideas (excluding observation for purposes of formal evaluation)	%	4	8	*282,504*	*507*
	SE	1.3	1.67		
Analyze samples of work done by our students	%	4	18	*281,589*	*505*
	SE	0.96	2.41		
Discuss student assessment data to make decisions about instruction	%	10	30	*285,504*	*509*
	SE	1.9	3.04		
Work together to develop teaching materials or activities for particular classes	%	19	30	*282,227*	*505*
	SE	2.51	2.81		
Seek each other's advice about instructional issues and problems	%	48	29	*284,292*	*507*
	SE	3.14	2.92		

**Alternative response choices were "Never" and "A few times a year."*

Figure 5-5
Teacher Reports on the 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 for the year 2001-02.

In thinking about all of the professional development activities you participated in during the 2001-02 school year, please indicate the extent to which participation in these activities has made the following contributions to you as a teacher. *Participation in last year's professional development activities specifically…*		Percent of teachers reporting "A lot"*	Percent of teachers reporting "Somewhat"*	*Weighted N*	*Unweighted N*
Increased my effectiveness at promoting student learning.	%	21	45	*264,610*	*470*
	SE	2.82	3.36		
Increased my knowledge of instructional techniques appropriate for the subject matter I teach.	%	22	42	*265,119*	*471*
	SE	2.76	3.37		
Deepened my grasp of the subject matter I teach.	%	18	44	*265,343*	*472*
	SE	2.53	3.40		
Improved my ability to use the state's curriculum frameworks to plan instruction.	%	18	37	*265,343*	*472*
	SE	2.52	3.25		
Improved my ability to consistently identify instructional goals appropriate to the subject matter I teach.	%	17	43	*264,691*	*471*
	SE	2.39	3.39		
Improved my ability to use student assessment data to plan instruction.	%	17	33	*265,343*	*472*
	SE	2.46	3.09		
Increased knowledge of assessment techniques	%	16	41	*264,900*	*470*
	SE	2.41	3.31		
Increased my effectiveness in using textbooks or curricular materials.	%	16	37	*264,087*	*468*
	SE	2.50	3.14		
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).	%	13	36	*265,119*	*471*
	SE	2.20	3.20		
Improved my classroom management, allowing me to try new instructional activities.	%	8	32	*265,119*	*471*
	SE	1.47	3.09		
Increased my confidence and responsiveness in interactions with parents.	%	7	22	*265,064*	*470*
	SE	1.38	2.65		
Increased my ability to adapt instruction for students with Individualized Education Plans.	%	7	22	*265,343*	*472*
	SE	1.50	2.84		

**Alternative response choices were "Not at all" or "A little."*

Table 5-1
Additional Activities Undertaken by Teachers

The following table presents the percentages and standard errors for the responses of teachers with at least 1 year of teaching experience for the year 2001-02.

Do you have any of the following responsibilities this school year (2002-03)? How many hours per week, on average, do you spend on each activity? *Do you currently have the responsibility of …*	Percent of teachers	SE	*Weighted N*	*Unweighted N*	Average hours per week per participant	SE	*Weighted N*	*Unweighted N*
Serving as a grade team leader, department chair, or other school-based leadership position?	41%	3.39	*264,622*	*467*	3	0.46	*100,296*	*157*
Modeling instruction or demonstrating lessons for preservice student teachers?	21%	2.84	*259,064*	*463*	8	2.32	*30,466*	*39*
Providing workshops and other training for teachers in your school or district?	19%	2.58	*264,029*	*468*	2	0.32	*21,976*	*39*
Serving as a master or supervising teacher for preservice student teachers?	16%	2.58	*261,451*	*466*	14	2.61	*37,501*	*46*
Mentoring interns, pre-interns, emergency permit teachers, or new teachers not in BTSA?	12%	2.34	*262,301*	*467*	3	0.65	*27,207*	*39*
Providing workshops and other training for teachers outside of your district?	4%	1.38	*262,301*	*467*	cell size too small to report statistics		*1,634*	*5*

Figure 5-6
Supports for Teaching Special Education Students

The following table presents the percentages and standard errors for the responses of all teachers for the year 2002-03.

What supports do you have to teach special education students?		Percent of teachers
I am certified to teach special education students (e.g., Education Specialist Credential, disability-specific credential or endorsement, speech/language certification, physical therapy license, occupational therapy license, or other certification related to special education).	%	10
	SE	1.87
Adequate training on special modifications or accommodations to use with students.	%	30
	SE	2.95
Access to each student's Individualized Education Plan (IEP)	%	69
	SE	2.98
Access to a resource teacher/specialist who provides direct services to students and/or consultation with teachers.	%	68
	SE	2.86
Teacher aides or instructional assistants for individual students.	%	36
	SE	3.13
Special materials or equipment to use with students (e.g., books on tape, computer software).	%	23
	SE	2.7
Access to high-quality resources (materials and/or textbooks) for students.	%	16
	SE	2.3
Smaller student load or class size	%	14
	SE	2.27

Weighted N = 285,680.

Unweighted N = 510.

Figure 5-7
Support for Teaching English Language Learner Students

The following table presents the percentages and standard errors for the responses of all teachers for the year 2002-03.

What supports do you have to teach English language learner (ELL) students?		Percent of teachers
I am certified to teach ELL students (e.g., CLAD, BCLAD, Bilingual Certificate of Competence, Language Development Specialist Certificate, or other certification related to ELL students).	%	47
	SE	3.09
Adequate training related to second-language acquisition	%	40
	SE	3.05
Access to a language development specialist who provides direct services to students and/or consultation with teachers.	%	30
	SE	2.82
Access to high-quality resources (materials and/or textbooks) for English-as-a-second-language instruction.	%	29
	SE	2.77
A teacher's aide or an instructional assistant who speaks one or more of the languages spoken by my ELL students.	%	24
	SE	2.65
I speak one or more of the languages spoken by my ELL students.	%	16
	SE	2.26
Access to high-quality resources (materials and/or textbooks) in the appropriate non-English language(s).	%	11
	SE	1.86

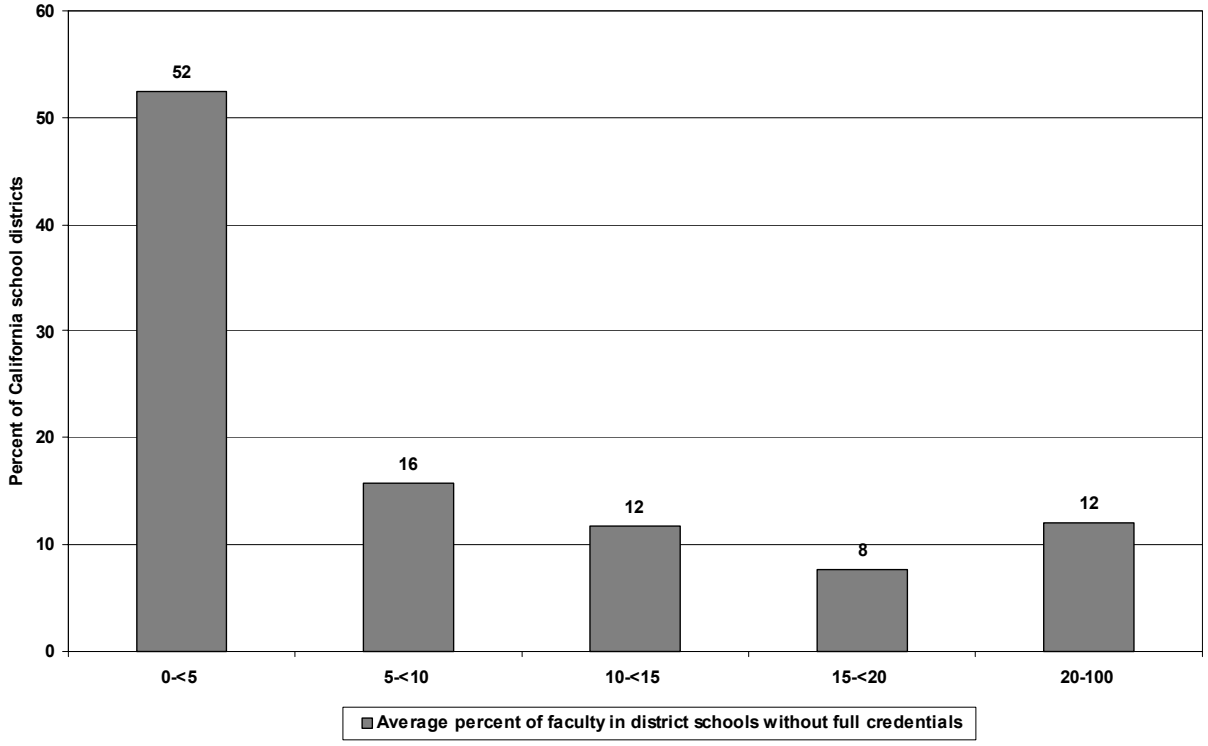
Weighted N = 285,680.

Unweighted N = 510.

Appendix C. Supplemental Figures for Chapter 2

This appendix provides additional figures for Chapter 2.

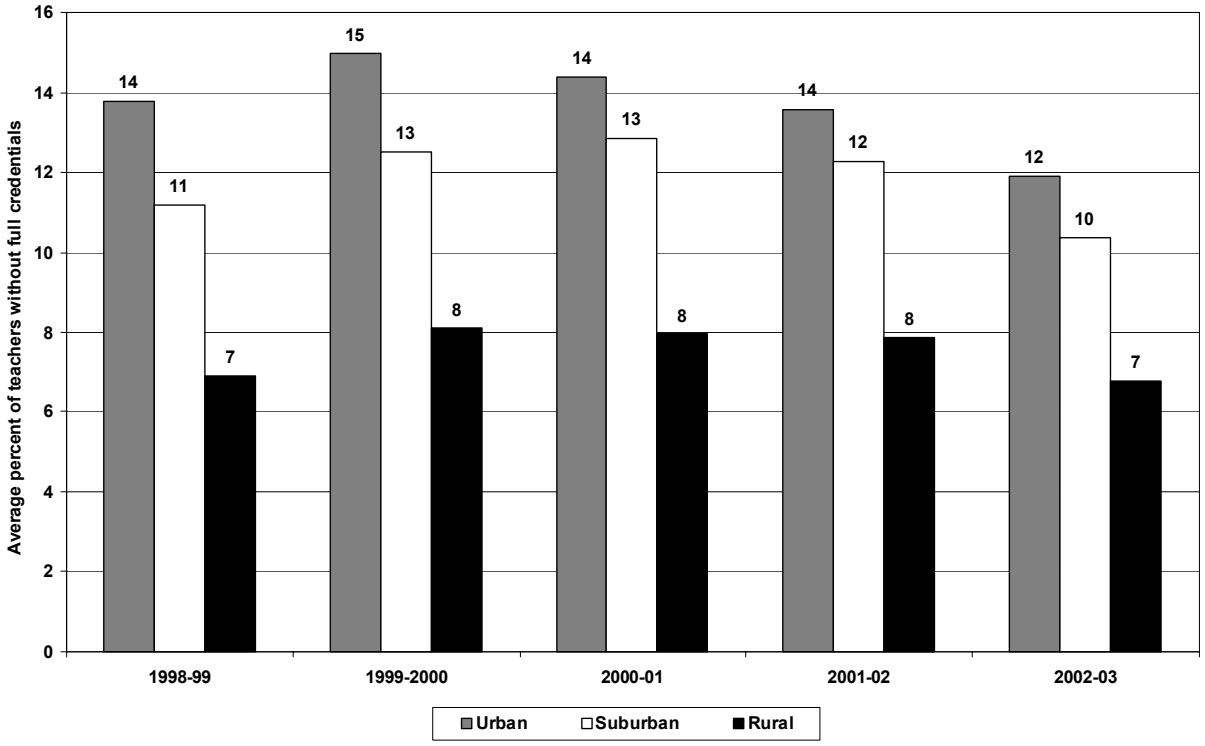
Figure C-1
Distribution of School Districts, by School-Level Percentage of Underprepared Faculty, 2002-03



Sources: CDE (2003c, 2003d); SRI analysis.

Note: The data for 2002-03 include all schools that are not adult, vocational, state special schools, or other alternative schools to provide a statewide portrait of the distribution of underprepared teachers.

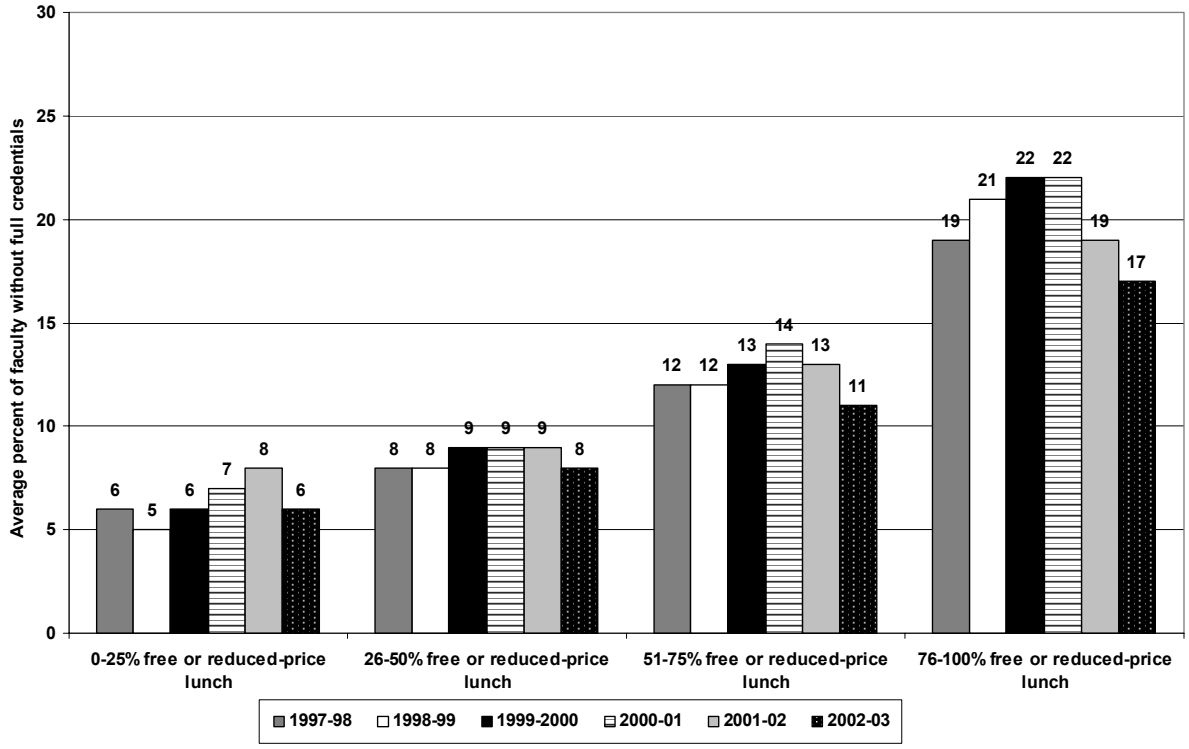
Figure C-2
Distribution of Underprepared Teachers, by Urbanicity, 1998-99 to 2002-03



Sources: CDE (1999c, 2000c, 2001c, 2002c, 2003c, 2003d); SRI analysis.

Note: For consistency with previous reports, this analysis used the three-level urbanicity variable (AREA) provided in 1998 CBEDS data file retrieved 1999 from the World Wide Web. The three levels were Urban, Suburban, and Rural. The exact Web address is not known. For the 2000-01 school year, CDE changed this variable to a seven-level variable (POP_STAT) as follows: (1) Large city, (2) Mid-size city, (3) Urban fringes of large city, (4) Urban fringes of mid-size city, (5) Large town, (6) Small town, and (7) Rural. For the 2000-01 analysis the seven-level POP_STAT variable was categorized in the following manner: Schools were categorized as Urban if POP_STAT = 1 or 2; schools were categorized as Suburban if POP_STAT = 3, 4, or 5; schools were categorized as Rural if POP_STAT = 6 or 7. Beginning in the 2001-02 school year, CDE split the "Rural" category into two categories: (7) Rural, outside MSA and (8) Rural, inside MSA, making the POP_STAT variable an eight-level variable. These two new categories were both categorized as "rural".

Figure C-3
Distribution of Underprepared Teachers, by School-Level Student Poverty, 1997-98 to 2002-03



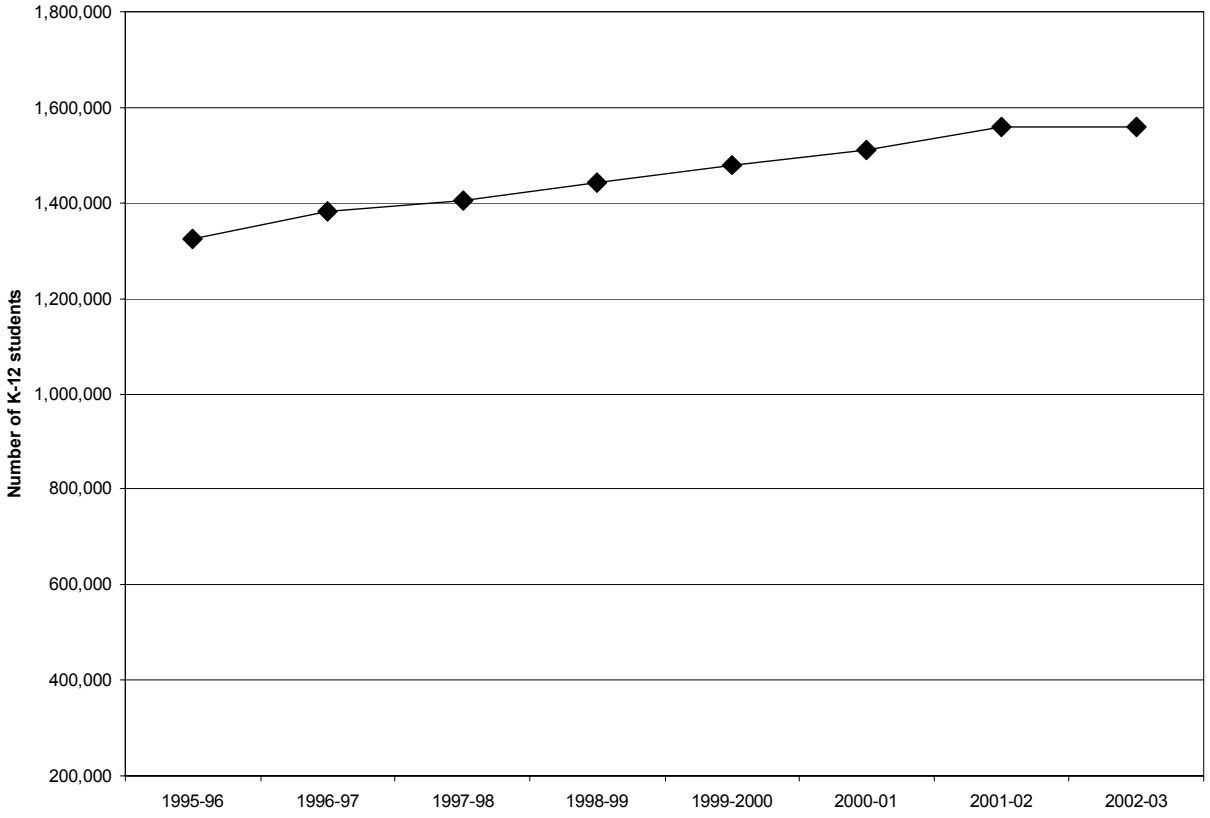
Sources: CDE (1998c, 1998e, 1998f, 1999c, 1999e, 1999f, 2000c, 2000f, 2000g, 2001c, 2001f, 2001g, 2002c, 2002f, 2002g, 2003c, 2003d, 2003g); SRI analysis.

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

Table C-1
Number of Schools in Distribution Analysis, by Student Poverty Category

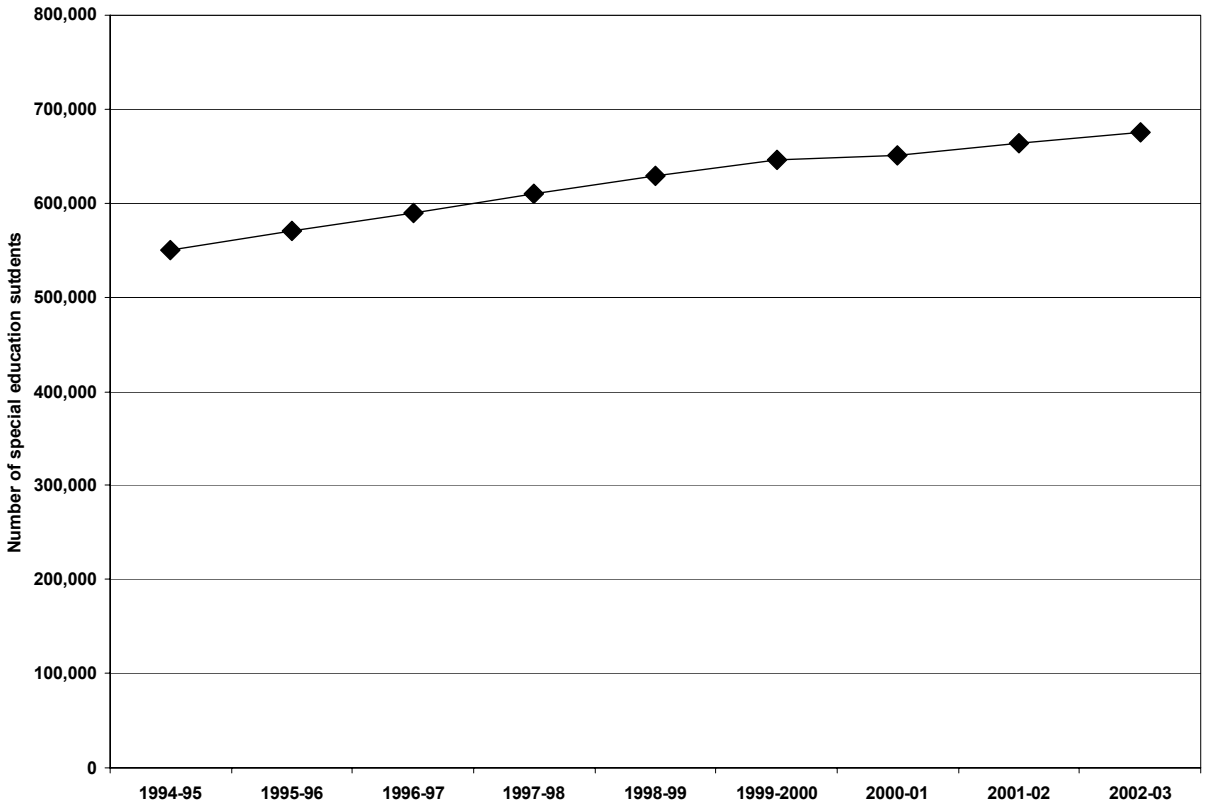
Percent on free or reduced-price lunch	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
0-25% on free or reduced-price lunch	1,967	1,920	1,866	2,307	2,268	2,054
26-50% on free or reduced-price lunch	1,711	1,611	1,592	1,712	1,683	1,671
51-75% on free or reduced-price lunch	1,636	1,569	1,563	1,758	1,763	1,814
76-100% on free or reduced-price lunch	1,689	1,692	1,689	1,738	1,861	1,957
Total	7,003	6,792	6,710	7,515	7,575	7,496

Figure C-4
English Language Learner Enrollment in California, 1995-96 to 2002-03



Source: CDE (2003p)

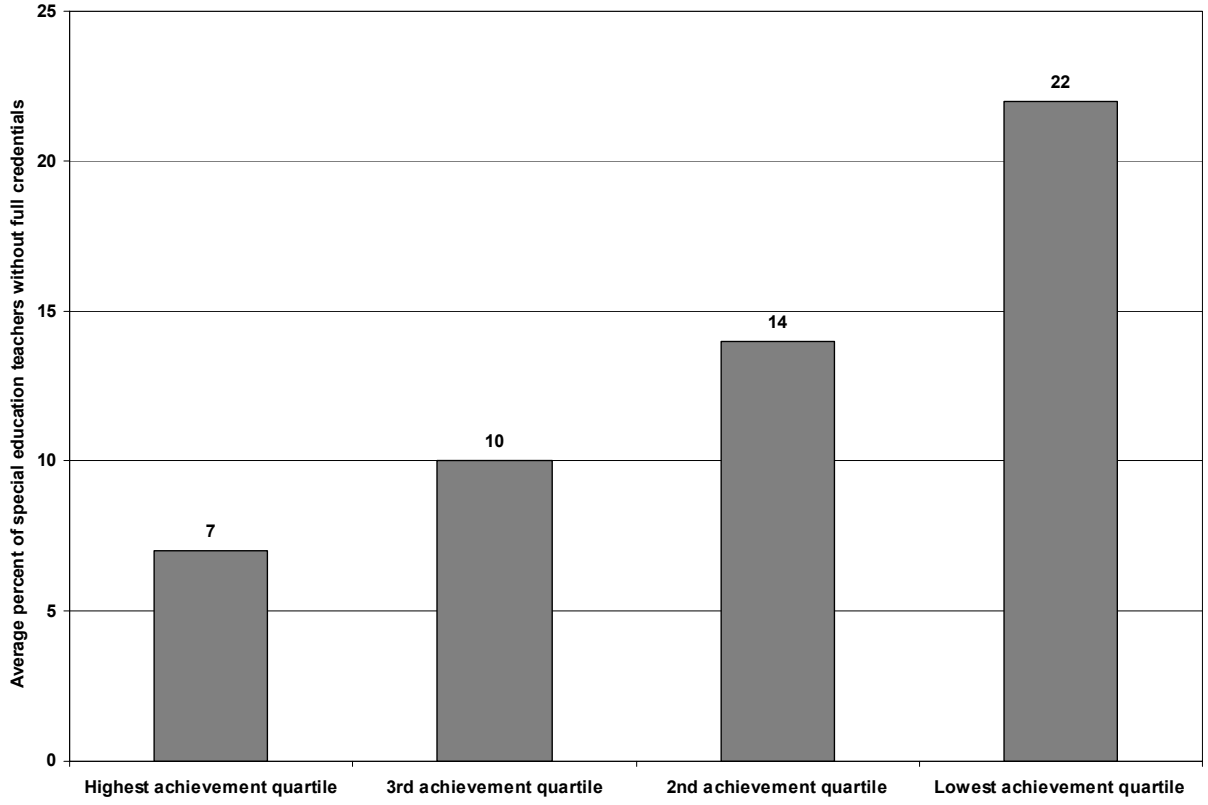
Figure C-5
Special Education Enrollment in California, 1994-95 to 2002-03



Sources: CDE (n.d., 2003o)

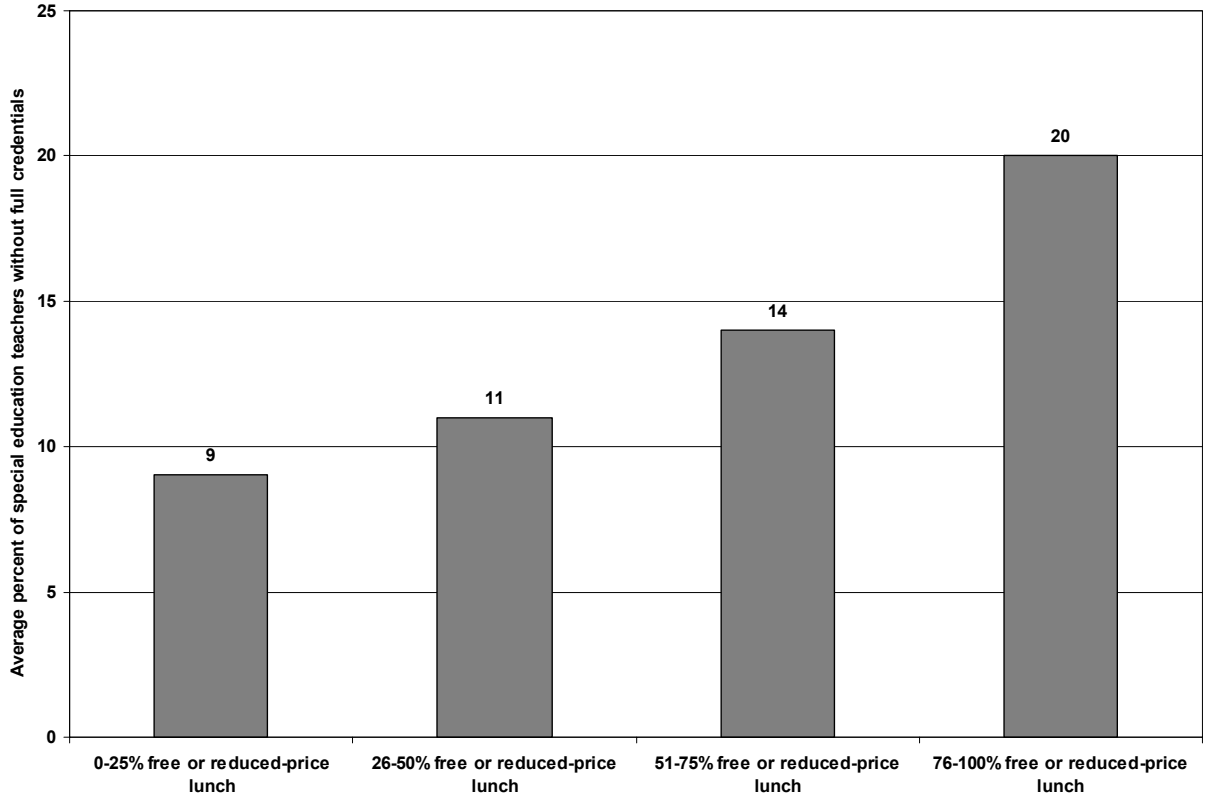
Note: The numbers for 1994-95 through 2000-01 are taken from the report: Special Education Programs in California: A Statistical Profile (http://www.cde.ca.gov/spbranch/sed/stat_prof/). The 2001-02 and 2002-03 numbers are taken from DataQuest.

Figure C-6
Distribution of Underprepared Special Education Teachers, by School-Level API Score, 2002-03



Sources: CDE (2003c, 2003d, 2003e)

Figure C-7
Distribution of Underprepared Special Education Teachers by School-Level Poverty, 2002-03



Sources: CDE (2003c, 2003d, 2003g)