In our full report, which is available on our Web site (www.cftl.org), we provide detailed recommendations for addressing these issues and strengthening the quality of the teacher workforce.
For most of the last decade, California’s policymakers and education leaders have been focused on finding enough qualified teachers for the state’s 6.3 million students.

Their persistence has paid off. California schools employ far fewer underprepared teachers. In the school year that began in 2000, about one in every seven teachers were underprepared. By the school year that ended in spring 2007, the portion of such underprepared teachers was down to one in 20, and the trend continues in the right direction.

Still, too many teachers are not adequately prepared to help their students succeed, and the least prepared teachers most often are teaching the students who need the most help. But the worst of the crisis has been weathered, and policymakers deserve considerable credit.

Now, policymakers need to expand their focus from the quantity of teachers to the quality of teaching. California must build a system that produces and supports the kind of quality teaching necessary to prepare students to succeed in an economy based on knowledge and skills.

Across the state, various institutions work on teacher development issues independently of one another. Although information is collected by teacher preparation institutions and in districts through hiring, induction and professional development programs, it rarely is shared in a way that produces improved teaching quality. Policymakers often lack the information needed to know how programs are working. And individual teachers — novices or veterans — rarely get the information that could help them improve. The state operates with largely inadequate and unreliable data. It does not have to be that way.

We’ve Survived the Flood

Teaching and California’s Future was created a decade ago to strengthen the teaching profession. From the start, we have focused on ensuring all students are assigned to teachers with the knowledge, skills, experience and support necessary to help them succeed. (See sidebar, page 2.)

Each year since 1999, we have produced practical, thorough research to help policymakers understand the challenges
they face and to offer context, clarity and hard data about the teaching profession. This brief summary is based on the latest research commissioned by the Center and conducted by SRI International. It includes several fact sheets to illuminate the state’s teaching force and the changes necessary to improve it. The full report is available free at www.cftl.org.

Although our overriding concern is teaching quality, much of our energy since 1999 has necessarily focused on making sure California simply had enough teachers to fill its classrooms. It was a logical priority: After the state chose to reduce the size of elementary classes in the mid-1990s, requiring thousands more teachers, California faced a sudden and urgent lack of qualified teachers. And the shortage of qualified teachers was much worse in our poorest communities, where students most need good teaching.

California had the equivalent of a flood; the levees were breached, and we were awash in novice teachers who were not even minimally qualified to teach. State policymakers dealt with the immediate emergency by producing more prepared teachers, offering programs to get underprepared teachers credentialed and providing more support for novice teachers.

But now the flood has receded for most school districts in the state, and the time has come to take a fresh look at rebuilding the patched levees and to be thoughtful about building the kind of system that California needs to ensure quality teaching through all of its public schools.

The time is right for such a fresh look, and others have joined us in that view. In the past few months, we have seen foundation-funded research — Getting Down to Facts — call for a total overhaul of the way California funds and runs schools. Governor Schwarzenegger has declared 2008 the “year of education.”

There is heightened interest in education reform in California at the moment, and that interest is likely to grow. Policymakers will be asked to make substantial changes. We implore them to stay focused on building a system of teacher development that provides qualified and effective teachers for every student.

Moving Toward Quality

Research across the nation and in California has made clear what common sense already told us: Beyond family background, the most important variable in how much students learn is the people who teach them.

We can’t change the background of our students. We can affect who teaches them and how prepared they are.
But if the research on the importance of quality teaching is clear, there is far less clarity on exactly what constitutes such teaching. In practice, there is an equation of sorts:

\[ \text{The background and preparation of the teacher} \]

\[ + \]

\[ \text{The teaching practices he or she uses in the classroom} \]

\[ = \]

\[ \text{Learning results for students} \]

California invests billions of dollars in its teaching force. We invest in teacher preparation, the mentoring of new teachers and the professional development of veteran teachers. We test prospective and new teachers, we certify teachers as “highly qualified” to comply with federal law, and we evaluate new and veteran teachers in their classrooms.

But, as our latest research demonstrates, these investments do not necessarily add up to a coherent system focused on teaching quality. Simply put, we don’t connect the dots. Within California, available information is not adequately used to measure or strengthen teaching quality. For example:

Prospective Teachers

Information from the tests that prospective teachers must pass to get into a teaching preparation program is not shared with their professors, nor do their professors regularly talk to one another about the strengths and weaknesses of their students. Like most graduate students, nearly all prospective teachers receive high grades — As or Bs — that make it hard to differentiate strengths and areas needing improvement. Mentor teachers or university supervisors in charge of student teaching lack information about how teacher candidates have done in their university classes, and many say they do not have the training to sufficiently evaluate teaching candidates. The diagnostic information gathered during this time is not shared along the teacher development continuum to strengthen the quality of teaching for novices.

Bright spots are emerging, such as the California Teacher Performance Assessment and the Performance Assessment for California Teachers, which assess candidates on a range of skills and knowledge to improve their teaching.

New Teachers

Principals report hiring new teachers based primarily on whether they have the right credentials, with much less attention given to candidates’ academic preparation or their readiness to teach. (See Fact Sheet 1.) Although all new teachers are assessed on the quality of their teaching, few are asked to demonstrate their ability to teach before they are hired.
All new teachers are supposed to have mentors that guide them into the profession. But the induction system depends on mentors who have widely varying capacities and differing views of what being a mentor entails, and the assessments of new teachers operate independently of one another — the data are not shared. New teachers report they must spend a substantial portion of their induction time on bureaucratic issues that are rigid, redundant and burdensome rather than on good teaching practice.

Veteran Teachers

Teachers are tenured — usually after two years in the classroom — and are required to be evaluated regularly by an administrator. But almost all of these evaluations do not consider learning outcomes for students and are not connected to teachers’ professional development needs. There rarely are distinctions between those teachers who are most effective with students and those who are least effective. Also, interviewed teachers reported that they do not receive concrete feedback from their evaluations. At the same time, teachers consistently tell us that they want constructive feedback on their teaching.

Beyond not using the data that do exist, the state does not collect sufficient information about teachers to improve programs. Efforts to produce a more robust data system — the California Longitudinal Teacher Integrated Data Education System — have been insufficiently funded, even though the cost is relatively small.

There is more. The state’s approach to the teaching force is weighted toward regulation and compliance, not leadership and support.

And teachers mostly move up the salary scale based on the additional degrees they have earned or the coursework they have taken, often without regard to whether the degrees and courses relate to the measured needs of their students. There rarely are incentives for teachers to participate in high-quality professional development or to take the most difficult teaching assignments.

The Stakes Are High

Every year, the stakes are going up for students, teachers and the economic health of California. As the economy in the state and world changes, the rewards are going to those with knowledge and skills, and the penalties for students who leave schools without either are growing more severe.

Over the past two years, approximately 80,000 high school seniors did not pass the state’s graduation exam, and tens of thousands more dropped out of high school. A new study by the Center for Benefit-Cost Studies of Education at Columbia University finds that the state economic benefit is $392,000 for each student who can be turned from a potential failure or dropout into a graduate.

Across the state, students are making academic progress. Far more students are reading at grade level, and far more are taking algebra. But the progress is nowhere near enough. In the last school year, fewer than half of California students scored at the proficient level or above on state exams — 43 percent in English language arts and 41 percent in mathematics. (See Fact Sheet 2.)

At the same time, under the federal No Child Left Behind law, 2,208 schools — about one-quarter of all California schools — are on the state’s watch list.
These uncomfortable facts are largely what produces the sense of political and economic urgency for improving education in California, and they underscore why policymakers have been so persistent in trying to deal with the issue.

Fewer Underprepared Teachers

California’s public schools employ almost 309,000 teachers, a number that has remained relatively flat for a few years as student enrollment has leveled out.

In the 2000–01 school year, the state had 42,427 underprepared teachers — about 14 percent of the workforce — who lacked a preliminary or clear credential. Last school year, that number had declined to 15,549 — about 5 percent of the workforce. (See Fact Sheet 3.)

And the state has fewer novice teachers who are in their first or second year of teaching — about 37,000 last year, compared to about 46,000 in 2000–01. Novice teachers, according to consistent research findings, are less effective with students than more experienced teachers.

Several years ago, we found that schools in which underprepared teachers comprised 20 percent or more of the faculty were so dysfunctional that they were incapable of supporting improvement. At the beginning of the decade, one in five California schools were in that situation. Last year, only one in 25 schools were similarly at risk.

Distribution Still Inequitable

Although the numbers of underprepared and novice teachers have declined, it still is far more likely that the least prepared teachers are assigned to schools that serve poor, largely Latino or African-American communities.

The bottom line is that those California schools in which students are performing least well are most likely to have the highest concentrations of underprepared teachers. For example, schools in the lowest achievement quartile have a higher average percentage of underprepared teachers than schools in the highest achievement quartile. (See Fact Sheet 4.)

In the quarter of high schools in which the most 10th grade students have passed the math portion of the state graduation test, underprepared and novice teachers make up about 19 percent of the teaching staff. But in the quarter of high schools in which 10th graders were least likely to have passed the math portion, the percentage of such teachers was nearly double — 34 percent.

Danger Ahead

Policymakers need to act thoughtfully to avoid reversing the trend of fewer underprepared teachers. Warning signs include:

- The number of new teachers being produced is decreasing. Four years ago, the state issued 27,150 preliminary teaching credentials. This year it issued only 22,419. (See Fact Sheet 5.)

- The number of teachers eligible for retirement is increasing as retirements have slowed slightly during the past few years. Still, the California teaching force has become grayer — about 100,000 teachers are over age 50, and more than 56,000 are over age 55. (See Fact Sheet 5.)

- There still are too few qualified teachers in special education and in specific high school subjects, particularly physical science and social science.

- The demand for teachers in California is uneven. In many communities along the coast, student enrollment continues to drop, while in many inland communities, enrollment is increasing rapidly.

- A pending lawsuit challenges the state’s classification of intern teachers as “highly qualified” under the federal No Child Left Behind law. If the suit is successful, it could push another 7,100 teachers into the underprepared column or even out of the classroom.
A New Policy Architecture Required

The Getting Down to Facts research described the state’s schools as over-regulated and organized around compliance. Further, information about the teacher development continuum is most often used to stop or start programs rather than make midcourse corrections and adjust programs to improve student outcomes. California clearly needs a new way of thinking about building a system of teacher development — a new policy architecture — that focuses on strengthening the quality of teaching.

California policymakers care about improving public education. Their task is not easy; change threatens the status quo, which tends to push back with considerable political vigor. And change often is cast in harsh terms — the needs of students, for example, pit against the adults who benefit from the existing system.

But the case can be made for a much more reasoned debate that is both student and teacher focused.

Conclusions

We would argue that policymakers have come a long way toward placing a fully qualified teacher in every classroom. The next step is to build a teacher development system that ensures the quality and effectiveness of instruction. (See Fact Sheet 6.)

We can do this by transforming the independent components of the teacher development continuum into a system that is capable of producing a workforce that meets the needs of all California students. The system we have in mind must not just rearrange old bureaucracies, but be flexible, dynamic, responsive and capable of improving — a system that “learns.” Guided by strong leadership at state and local levels, it must stay focused on strengthening teaching quality. At the heart of such a system are sound, reliable data used wisely to inform policy and strengthen teaching.

Recommendations

The Center for the Future of Teaching and Learning recommends:

- Continuing to develop the California Longitudinal Teacher Integrated Data Education System and using the data to inform decisions about revising, aligning and making the components of teacher development into a system that learns.

- Regularly assessing classroom practice and using the information gathered to strengthen teaching quality.

- Continuing to refine and strengthen current measurement tools used to license, hire, induct and improve the skills of teachers.

- Reviewing progress toward implementation of existing policies requiring a more equitable distribution of intern and novice teachers.

- Further eliminating bureaucratic barriers to teaching to build a larger pool of prospective teachers.

SEE THE WEB: In our full report, which is available on our Web site (www.cftl.org), we provide detailed recommendations for addressing these issues and strengthening the quality of the teacher workforce.
What’s Considered “Most Important” in Hiring Teachers?

An extensive survey of California principals reveals that, when they consider hiring a teacher, they rank credentials at the top of the list of important factors but give much less importance to candidates’ academic strength and sample lesson plans.

And principals in low-performing schools are much more likely than principals in high-performing schools to say they are unable to hire the teachers prepared to meet the needs of their students.

Qualifications That Principals Report To Be “Very Important” or “Important” When Making a Job Offer

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Always</th>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification status (holds a valid teaching certificate)</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>Certification exam results (e.g., CBEST, CSET)</td>
<td>63%</td>
<td>21%</td>
</tr>
<tr>
<td>Performance of student teaching, if candidate student taught in district</td>
<td>52%</td>
<td>34%</td>
</tr>
<tr>
<td>Teaching experience</td>
<td>47%</td>
<td>40%</td>
</tr>
<tr>
<td>Experience working with the student population served by school</td>
<td>43%</td>
<td>38%</td>
</tr>
<tr>
<td>Grades in college major</td>
<td>14%</td>
<td>38%</td>
</tr>
<tr>
<td>Sample lesson plans or unit plans</td>
<td>13%</td>
<td>32%</td>
</tr>
<tr>
<td>National Board Certification</td>
<td>10%</td>
<td>27%</td>
</tr>
<tr>
<td>Reputation of college attended</td>
<td>8%</td>
<td>34%</td>
</tr>
<tr>
<td>Overall grades in college</td>
<td>6%</td>
<td>36%</td>
</tr>
<tr>
<td>Nonteaching work experience</td>
<td>5%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Percentage of principals who say “very important” or “important”

<table>
<thead>
<tr>
<th>Academic Performance Index</th>
<th>Always</th>
<th>Usually</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>71%</td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>84%</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>94%</td>
<td></td>
</tr>
</tbody>
</table>

Source: SRI Principal Survey 2007
Student Achievement: The Search for Proficiency

According to state test data, the recent upward trend of California student achievement has leveled out. Although more students are taking and passing harder courses — such as algebra — as a group, they simply are not doing well enough on almost any measure.

Less than half of the state’s students are scoring at the proficient level or above in literacy or mathematics. In 2007, only 43 percent of students scored at least at the proficient level in English language arts on the California Standards Test; in mathematics, only 41 percent were at least proficient. The federal No Child Left Behind law requires all students to be at least proficient by 2014.

And in every grade and subject, substantial gaps separate achievement among racial groups. Asian and white students score higher than their African-American and Latino peers.
Underprepared Teachers: The Number Continues To Decline

After California reduced class size in elementary schools in the mid-1990s, the number of teachers who were under-prepared — meaning they lacked a preliminary or clear teaching credential — increased substantially.

In 2000, about one in every seven of California’s slightly more than 300,000 teachers were underprepared. Today, only one in 20 are similarly underprepared.

California’s Underprepared Teachers, 1998–2007

Source: California Department of Education.
Distribution Still Unfair: Least Prepared Teachers Face Neediest Students

Poor and minority students in California are far more likely than affluent and white students to face teachers who are underprepared and inexperienced.

Schools in the lowest achievement quartile continue to have a higher average percentage of underprepared teachers than schools in the highest achievement quartile. It is serious enough when students have a teacher who is underprepared, but poor and minority students are far more likely to face a string of underprepared teachers as they advance through the grades and risk falling even further behind academically.

### Underprepared Teachers in Schools in the Highest and Lowest Achievement Quartiles on Academic Performance Index, 2000–01 to 2006–07

<table>
<thead>
<tr>
<th>Year</th>
<th>Lowest API achievement quartile</th>
<th>Highest API achievement quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000–01</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>2001–02</td>
<td>19%</td>
<td>0%</td>
</tr>
<tr>
<td>2002–03</td>
<td>18%</td>
<td>0%</td>
</tr>
<tr>
<td>2003–04</td>
<td>17%</td>
<td>0%</td>
</tr>
<tr>
<td>2004–05</td>
<td>16%</td>
<td>0%</td>
</tr>
<tr>
<td>2005–06</td>
<td>15%</td>
<td>0%</td>
</tr>
<tr>
<td>2006–07</td>
<td>14%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: California Department of Education.

### Maldistribution 2007: Bad Odds for Kids Who Need Better

For California sixth graders in 2007, the odds of having one underprepared teacher during their elementary years if their school is in the:

- lowest achievement quartile: 40/100
- highest achievement quartile: 18/100

The odds of having had more than one underprepared teacher during their elementary years if their school is in the:

- lowest achievement quartile: 15/100
- highest achievement quartile: 2/100

Sources: California Department of Education and SRI analysis.
California’s teaching force is increasingly gray. The state will have to replace approximately one-third of its 309,000 teachers in the next several years due to retirement alone and even more due to attrition of younger teachers who decide to leave teaching.

But the rate at which the state produces new teachers is slowing. Production of new teachers is down, and the number of students entering teacher preparation programs also is declining.
High-quality teaching occurs when teachers come to the classroom with a certain toolkit of knowledge and skills, use a set of effective practices, and work as part of a professional community in a workplace that supports continuous learning by students and adults.

Consensus of Teaching Quality Forum, fall 2007

1. Teacher Preparation
Prospective teachers are assessed many times, starting when they apply for their teacher education programs, through their coursework and student teaching, and increasingly, as they begin teaching. But the data from these assessments are compartmentalized and not commonly shared among those who can use the information to help better prepare teachers.

2. Teacher Hiring
The hiring process often is quite different among districts. More affluent districts often choose from large pools of qualified applicants, while less affluent and urban districts scramble simply to find credentialed teachers. Rarely do districts have the opportunity to see applicants actually teach a lesson or even produce a lesson plan before they are hired.

3. Teacher Evaluation
California has built multiple measures to examine teaching quality throughout a teacher’s career. But the measures are disjointed, data are not shared among the programs or the people who can use them, and teachers themselves rarely get the meaningful feedback they need to improve their own teaching.