California’s Teaching Force
Key Issues and Trends, 2006

The Center for the Future of Teaching and Learning

Research conducted by SRI International
California State University, Office of the Chancellor | Policy Analysis for California Education | University of California, Office of the President | WestEd
The Education Policy Context

• The policy community has put into place a new set of initiatives aimed at strengthening teaching and addressing equity.
• The state has made progress in decreasing the numbers of underprepared teachers.
• But there is still work to be done to ensure an adequate supply of well prepared and effective math, science, special education teachers.
• The high bar for students’ academic achievement set by NCLB will continue to drive additional action to strengthen teaching and ensure equity.
• Thorough implementation of the new legislation at the local level is critical; full funding, monitoring and evaluation is required to make sure mid-course corrections result in stronger programs to strengthen teaching.
According to state tests, California students have improved over the past few years. But performance is not increasing fast enough to enable California to meet federal requirements.
Overall Student Scores Mask Achievement Gap

Mathematics

- Federal Target (Elementary/Middle)
- Federal Target (High)
- Asian
- White
- All students
- African-American
- Latino

English

- Federal Target (Elementary/Middle)
- Federal Target (High)
- Asian
- White
- All students
- African-American
- Latino
Closing the Proficiency Gap--Mathematics

To meet NCLB expectations, California needs to increase students’ mathematics proficiency in:

- 4th grade by 46%
- General math (middle school) by 78%
- Algebra I by 77%
High School Exit Exam

- Nearly 40,000 seniors from the Class of 2006 did not pass the exit exam.

**Percentage of First-Time Test Takers Passing the California High School Exit Exam, English**

- Class of 2007:
  - All students: 76%
  - Latino: 86%
  - White: 65%
  - African American: 64%
  - Asian: 42%
  - English language learners: 42%

*Source: California Department of Education.*
Number of Teachers in the California Workforce

![Bar chart showing the number of teachers in California from 1996-97 to 2005-06. The number of teachers increases each year, starting from 250,527 in 1996-97 to 307,864 in 2005-06.]
Public School Enrollment, 1990 to 2015

Number of K-12 students

- 500,000
- 1,000,000
- 1,500,000
- 2,000,000
- 2,500,000
- 3,000,000
- 3,500,000


K-5 enrollment 6-8 enrollment 9-12 enrollment

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Number of Underprepared Teachers by Credential Type

<table>
<thead>
<tr>
<th>Year</th>
<th>More than one underprepared credential type or missing credential information</th>
<th>University or district intern credential</th>
<th>Emergency permit, pre-intern certificate, or waiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>40,587</td>
<td>42,427</td>
<td>41,739</td>
</tr>
<tr>
<td>2000-01</td>
<td>28,139</td>
<td>41,739</td>
<td>37,309</td>
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<tr>
<td>2001-02</td>
<td>17,839</td>
<td>20,399</td>
<td>42,427</td>
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<tr>
<td>2002-03</td>
<td>17,839</td>
<td>20,399</td>
<td>40,587</td>
</tr>
<tr>
<td>2003-04</td>
<td>17,839</td>
<td>20,399</td>
<td>40,587</td>
</tr>
<tr>
<td>2004-05</td>
<td>17,839</td>
<td>20,399</td>
<td>40,587</td>
</tr>
<tr>
<td>2005-06</td>
<td>17,839</td>
<td>20,399</td>
<td>40,587</td>
</tr>
</tbody>
</table>
Percentage of Out-of-Field High School Teachers in Core Subjects, 2005–06

<table>
<thead>
<tr>
<th>Subject</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Life science</td>
<td>11%</td>
</tr>
<tr>
<td>Math</td>
<td>12%</td>
</tr>
<tr>
<td>English language arts</td>
<td>15%</td>
</tr>
<tr>
<td>Social science</td>
<td>18%</td>
</tr>
<tr>
<td>Physical science</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: California Department of Education.
Distribution of Schools by Percent of Underprepared Teachers

- **430 schools** still have 20% or more underprepared teachers
- **280,000 students** go to these schools
**Maldistribution 2006: The Odds for Sixth Graders**

For California sixth graders, the odds of having had one under-prepared teacher if they are in schools in the:

- lowest achievement quartile: 4 in 10
- highest achievement quartile: 2 in 10

The odds of having had more than one underprepared teacher if they are in schools in the:

- lowest achievement quartile: 1 in 4
- highest achievement quartile: 1 in 50

*Source: California Department of Education and SRI analysis.*
Persistent Inequities

- Intern teachers are maldistributed—75% of interns are assigned to high minority schools.

- Only 25% of interns are assigned to low minority schools.
Students in the lowest performing schools are the most likely to get novice and underprepared teachers.
Schools with the **lowest** percentage of students passing the CAHSEE have the **highest** percentage of underprepared and novice teachers.
Underprepared First- and Second-Year Teachers

<table>
<thead>
<tr>
<th></th>
<th>2004-05</th>
<th>2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Secondary</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Special education</td>
<td>49</td>
<td>45</td>
</tr>
</tbody>
</table>
High Minority Schools Get More Underprepared Special Education Teachers

- Lowest minority quartile: 7% (2004-05), 7% (2005-06)
- Second minority quartile: 11% (2004-05), 10% (2005-06)
- Third minority quartile: 15% (2004-05), 13% (2005-06)
- Highest minority quartile: 22% (2004-05), 18% (2005-06)
Fully Credentialed Veteran Teachers with EL Authorization

California teachers with at least one English learner in their classroom are required to have an EL authorization.
Distribution of Underprepared Science and Math Teachers by School-Level Percentage of Minority Students, 2005–06

Source: California Department of Education.
Underprepared First- and Second-Year Mathematics and Science Teachers, 2005-06

- All teachers: 23%
- Middle school mathematics: 29%
- High school mathematics: 40%
- Middle school science: 29%
- High school science: 35%
The Pending Retirement Wave

Age Distribution of K-12 Public School Teachers, 2005-06
Actual Retirements

California State Teachers’ Retirement System Membership Retirements

Number of retirements

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Retirements</th>
</tr>
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<tbody>
<tr>
<td>1995-96</td>
<td>6,985</td>
</tr>
<tr>
<td>1996-97</td>
<td>6,011</td>
</tr>
<tr>
<td>1997-98</td>
<td>7,332</td>
</tr>
<tr>
<td>1998-99</td>
<td>7,248</td>
</tr>
<tr>
<td>1999-2000</td>
<td>7,556</td>
</tr>
<tr>
<td>2000-01</td>
<td>8,701</td>
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<tr>
<td>2001-02</td>
<td>9,762</td>
</tr>
<tr>
<td>2002-03</td>
<td>11,189</td>
</tr>
<tr>
<td>2003-04</td>
<td>12,301</td>
</tr>
<tr>
<td>2004-05</td>
<td>11,624</td>
</tr>
</tbody>
</table>
Declining Numbers: Teacher Preparation Programs

Number of enrollees

<table>
<thead>
<tr>
<th>Year</th>
<th>Multiple-subject</th>
<th>Single-subject</th>
<th>Education specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>40,240</td>
<td>17,823</td>
<td>8,007</td>
</tr>
<tr>
<td>2001-02</td>
<td>43,550</td>
<td>20,698</td>
<td>11,842</td>
</tr>
<tr>
<td>2002-03</td>
<td>41,607</td>
<td>20,293</td>
<td>11,311</td>
</tr>
<tr>
<td>2003-04</td>
<td>35,936</td>
<td>19,131</td>
<td>11,426</td>
</tr>
</tbody>
</table>
New Preliminary Teaching Credentials Issued, 1997–98 to 2004–05

Source: California Commission on Teacher Credentialing.
Key Legislative Initiatives in 2006

- AB 1802 (Laird) *Education Finance*
- SB 472 (Alquist) *Mathematics and Reading Professional Development*
- SB 1133 (Torlakson) *Quality Education Investment Act*
- SB 1209 (Scott) *Omnibus Teacher Workforce Bill*
- SB 1614 (Simitian) *Longitudinal Teacher Data System*
- SB 1655 (Scott) *Voluntary Transfer*
- SB 2117 (Coto) *English Language Learners*
Highlights of Senate Bill 1209

- Removes barriers to entry into the teaching profession
- Seeks to streamline hiring processes
- Provides training and support to new teachers
- Offers incentives to encourage veteran teachers to serve as mentors in high need schools
- Encourages districts and bargaining units to develop incentives that strengthen the teaching corps in variety of ways
Recommendations

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

- Goal of review: identify any additional improvements and refinements necessary to ensure successful implementation
Recommendations

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

- Provide professional development for out-of-field teachers
- Design incentives to recruit special education teachers
- Focus resources on the ten fastest growing counties in the state
- Eliminate barriers for retired teachers to serve in shortage areas or as mentors to novice teachers
Recommendations

Develop a comprehensive action plan to address the critical shortage of mathematics and science teachers.

- Encourage articulation agreements between California Community Colleges and the California State University to ensure a pipeline for math and science teachers

- Create tax incentives for science and technology-based businesses and industries to provide summer employment to teachers of science and mathematics