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English Learners in California Schools: Unequal resources, unequal outcomes

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Abstract

The *Williams vs the State of California* class action suit on behalf of poor children in that state argues that California provides a fundamentally inequitable education to students based on wealth and language status. This article, an earlier version of which was prepared as background to that case, reviews the conditions of schooling for English learners in the state with the largest population of such students, totaling nearly 1.6 million in 2003, and comprising about 40 percent of nation’s English learners. We argue, with evidence, that there are seven aspects of the schooling of English language learners where students receive an education that is demonstrably inferior to that of English speakers. For example, these students are assigned to less qualified teachers, are provided with inferior curriculum and less time to cover it, are housed in inferior facilities where they are often segregated from English speaking peers, and are assessed by invalid instruments that provide little, if any, information about their actual achievement. We end with suggestions for ways in which teachers, administrators, and policymakers can begin to address these inequities, even while legal remedies may remain in the distant future.

Introduction

The fact that the United States remains an immigrant nation is nowhere more apparent than in our public schools where an increasing percentage of students are English learners. In 2000-01 these students represented ten percent of all students in the United States, and 25 percent of California’s public school population (Kindler, 2002). In the nation they numbered 4.6 million; while in California alone, they were more than 1.5 million students. Most English learners both in the U. S. (79%) and in California (83%) speak Spanish as their primary language. The second largest language group in both California and the U.S. is Vietnamese, however they account for only 2 percent and 2.5 percent respectively. California is also by far home to more limited English students than any other state. Thirty-three percent of all of the nation’s English learner students live in that state; the next largest concentration is in Texas, with 12 percent of the total (Note 1). How best to educate these students continues to be a highly controversial topic and the source of considerable policy debate. However, with such a large population of English learners, it is surprising how little attention is actually paid to the basic learning resources these student receive in California, and in the nation.

English learners are distributed throughout the schools, from kindergarten to grade 12. One out of four students in the public schools in California is an English learner, but one out of three of the students in the elementary grades lacks proficiency in English (Rumberger & Gándara, 2000, Table 1). There are very few California schools that report having no English learners among their student population (see Table 14). Today, the typical California school is composed of both English learners and English speakers, and in many schools more than one-quarter of the student body is not fluent in English. Although most English learners are found at the elementary school level, a larger proportion of English learners (hereafter also referred to as ELs or EL students) is found in
secondary schools than commonly believed. More than 18 percent of California’s secondary school students (500,000 plus) are English learners (Rumberger & Gándara, 2000, Table 1). Proportionately, the number of English learners in secondary schools has been growing at a faster rate than the number in elementary schools (California Department of Education, Language Census 2001). The increase in the population of these secondary level English learners presents a particular challenge for both the students and the schools that serve them. This is principally because older children have less time to acquire both English and academic skills in order to get ready for high school graduation and to prepare for post-secondary options. Unfortunately the unique needs of these older EL students are often even more overlooked than those of their younger peers. This article assesses the condition of education for English learners in California, and, we believe, has significant implications for the nation.

Organization of this Article

We begin this article with an examination of the achievement data on English learners in California. We think it is first important to establish the degree to which these students’ achievement represents a challenge to the overall productivity and welfare of the state’s education system. In other words, we attempt to make the case that the achievement gaps are so wide that they threaten the well-being of the state and its economy, and therefore should be a concern to everyone. We then follow with a discussion of seven factors that we argue contribute significantly to this situation. These seven factors are not exhaustive of the problems faced by EL students, nor can they be neatly compartmentalized. Some, like the shortage of skilled teachers, represent both input shortcomings (e.g., insufficient numbers of qualified teachers) as well as process problems (e.g., inadequate instruction in the classroom) simultaneously. Therefore, we present these factors roughly in the order in which we think they affect the condition of schooling for English learners and are amenable to policy intervention. We end with a set of recommendations for addressing these issues. While this work grew out of a major class action lawsuit in California, we acknowledge that legal remedies almost certainly lie in the fairly distant future, and more general social change perhaps beyond that. Therefore our recommendations speak directly to the kinds of actions that school personnel might undertake in the shorter term.

Achievement of English learners

Data from a variety of sources reveal that the academic achievement of English learners lags considerably behind the achievement of English background students. We examined the achievement of English learners using a number of different measures and data sets – including data from the Early Childhood Longitudinal Study (ECLS) of the U.S. Department of Education, the American Institutes for Research Implementation of Proposition 227 Study (Parrish, et al., 2001; 2002) and the California Department of Education published data. (Note 2) At the same time that we present analyses of existing data on student achievement for English learners, we do so fully acknowledging the serious limitations of achievement scores based on tests administered in English to students who do not speak English well, or at all. We discuss below the issues associated with such assessment.
Stanford 9 Achievement Scores

Between the years 1998 and 2002, the state used the Stanford Achievement Test, Version 9 (SAT9)—a national, norm-referenced, English-only achievement test—as the primary means to assess the academic achievement of California’s students. (Note 3) In spite of the fact that we disagree with the state’s decision to use this test for students who do not speak enough English to understand it, we provide an analysis of the achievement of English learners vis-à-vis their English-speaking peers as these same test scores are routinely reported as accountability measures in the state.

A persistent gap in test scores is a major factor in the school experience of English learners. As a group they continue to perform more poorly than English-speaking students throughout their entire school career. This is clearly illustrated by the SAT 9 English reading scores across grade levels (see Figure 1). As expected, English learners who, by definition, are not yet proficient in English, have low reading scores across all grade levels. Language minority students who enter school already proficient in English (Fluent English Proficient or FEP) start out comparable to native English speakers, but by third grade they fall behind and never catch up. Students who enter the schools as English learners and who are subsequently reclassified as proficient (R-FEP), also start out comparable, but by 5th grade they fall below native English speakers, and by 7th grade they fall even further behind these students. Such results challenge the belief that if English learners simply demonstrated “proficiency” in English—as defined by early scores on the SAT 9 test—the achievement gap would disappear.

Figure 1. 2001 California SAT9 Reading Test Scores by Grade Level and Language Background

Even though this analysis shows a sizeable and growing achievement gap between English speaking and non-English speaking students across grade levels, there are some suggestions in the data that the gap has narrowed slightly in recent years. To investigate this issue, we examined SAT9 reading test scale scores between the years 1998 and 2001 compiled by Parrish et al. (2002) as part of the American Institutes for Research (AIR) year 2 evaluation of proposition 227. Scale scores show growth in achievement over time based on a common metric. Thus it provides a good indication of the amount of learning that has taken place over time.

The AIR evaluation team had access to individual student test scores for all the students in California for the years 1998 through 2001 by language classification. (Note 4) The evaluation team examined changes in test scores between 1998 and 2001 for each grade level and for three synthetic cohorts of students: (Note 5) (1) a cohort of students who were enrolled in grade 2 in 1998, grade 3 in 1999, grade 4 in 2000, and grade 5 in 2001; (2) a cohort of students who were enrolled in grade 4 in 1998, grade 5 in 1999, and grade 6 in 2000, and grade 7 in 2001; and (3) a cohort of students who were enrolled in grade 8 in 1998, grade 9 in 1999, grade 10 in 2000, and grade 11 in 2001. In order to compare non-overlapping cohorts, we replaced the second cohort with one that began when students were enrolled in grade 5 in 1998. One of the innovations of Parrish and his colleagues is that they compared English-only students with the combined group of current English learners and former English learners who were reclassified as Fluent English Proficient (R-FEP) in order to better assess the progress of all students who first entered California schools as English learners. Because an increasing number of EL students become proficient in English as they progress through school and are reclassified as fluent English speakers, the number of EL students tends to decrease among older grade cohorts while the number of R-FEP students tends to increase.

Figure 2. SAT 9 Reading Scores by Grade Cohort and Language Classification, 1998-2001

![Graph showing SAT 9 Reading Scores by Grade Cohort and Language Classification, 1998-2001](source: Parrish, et al. (2002), Exhibit 1.)
The results, illustrated in Figure 2, again show a sizeable achievement gap between English only students and current/former English learners. Both groups show more achievement growth in the early years than in the later years, which reflects the increasing difficulty of learning higher levels of more academic English (Scarcella & Rumberger, 2000). The data show a slight narrowing of the achievement gap across all three cohorts, as Parrish, et al. note in their evaluation study (Parrish, et al., 2002, page III-15). For example, the achievement level of English only students improved from 581 points in grade 2 to 658 points in grade 5, an increase of 77 points, while the achievement level of English learners and former English learners improved 80 points. As a result, the achievement gap narrowed by 3 points. Among all three cohorts and three subjects (reading, language, and math), the 227 evaluation team found that the achievement gap narrowed by 1 to 8 points (Parrish, et al., 2002, Exhibits 10, 13, 16).

It is interesting to note that the greatest achievement growth for the grade 2 cohorts occurred in schools that offered bilingual instruction before Proposition 227 or continued to offer bilingual instruction after Proposition 227 (Figure 3). In addition, the slight narrowing of the achievement gap between English only and EL and former EL students noted above was due to reductions in the achievement gap in those two types of schools, while in schools that never offered bilingual education, there was no reduction in the achievement gap.

**Figure 3. Reading Achievement Gains for Grade 2-5 Cohort by Language Group and Instructional Model**

Despite these improvements, the achievement gap remains large and increases at the higher grades. To illustrate, in grade 5, when many students have completed elementary school, the left-most horizontal line in Figure 2 shows that current and former English
learners are reading at the same level as English only students between grades 3 and 4, a gap of about one and one half years. By grade 8, when most students have completed middle school, the next horizontal line shows that current and former English learners are reading at the same level as English only students in grade 6, a gap of about 2 years. By grade 11, the right-most horizontal line shows that current and former English learners are reading at the same level as English only students between grades 6 and 7, a gap of about 4 and one half years.

California High School Exit Exam

The California High School Exit Exam (CAHSEE) is a major element of California’s education accountability system. All students in the class of 2004 and beyond were expected to pass the exam in order to receive a high school diploma until very recently when the State Board of Education authorized a delay in implementation of sanctions until 2007. The data provide a hint as to why the class of 2004 received this 11th hour reprieve. The exam is a standards-based, criterion-referenced test that is designed to ensure that all California high school graduates have a similar set of fundamental skills in English language arts and mathematics (California Education Code section 60850-60859). The need for improving the education provided by California’s high schools is undeniable. Although accountability measures may be necessary to this effort, there is early evidence that the CAHSEE presents exceptionally high stakes for EL students.

Although the test is a basic skills examination pegged to early high school standards, (Note 6) by the end of their sophomore year, only 48 percent of students from the class of 2004 had passed it. However, only 19 percent of English learners had passed at this same point (California Department of Education, 2002, Attachment 1).

School Readiness

One reason for the underachievement of English learners is that they begin school significantly behind their English-speaking peers. Data from the Early Childhood Longitudinal Study (ECLS) show that about half of California kindergartners from English speaking backgrounds scored above the 50th percentile in fall assessments of language, mathematics, and general knowledge. However, no more than 17 percent of kindergartners from non-English speaking backgrounds scored above the 50th percentile (see Figure 4). One reason for this disparity is that many English learners begin school without a sufficient understanding of oral English that English background students acquire naturally in their home environment. According to the ECLS data, more than 60 percent of English learners who entered California kindergartens in the fall of 1998 did not understand English well enough to be assessed in English. And even after one year of school, 38 percent of the students were still not proficient enough in English to be assessed. (Note 7)
Teachers and schools make judgments about students’ abilities based on the information available to them, including test scores. Schools make class placement decisions based, at least in part, on students’ standardized test scores. Moreover, when the teacher does not speak the language of the child, cannot communicate with the child’s family, and has little other information to rely on, test scores can take on even greater importance. Students who score low on tests are likely to be placed in remedial education, even though such a placement is unlikely to help students close the educational gap with their mainstream peers. (Gottlieb, Alter, Gottlieb, & Wishner, 1994; Skirtic, 1991). In *Hobson v Hansen* (269 F. Supp.401, 490; DDC 1967), the Washington DC Superior Court noted in a major test case on the viability of curriculum tracking as an educational practice that “a sixth grade student nourished on a third-grade curriculum is apt to finish the year with a third-grade education. . .”.

**Conditions of Inequity for English Learners**

The achievement gap between English learners and their English-only counterparts can be attributed, in part, to a number of inequitable conditions that affect their opportunities to learn. Our own research, combined with a review of the research of our colleagues, leads us to identify seven primary areas in which these students appear to receive a significantly inferior educational experience, even when compared to other low-income students in the public schools.

1. **Inequitable access to appropriately trained teachers**

   English learners are more likely than any other children to be taught by teachers with an emergency credential. There is reason for concern about the low percentage of teachers
who are qualified to teach these students. An increasingly large body of research has established that teachers with good professional preparation make a difference in students' learning (Darling- Hammond, 2002; Haycock, 1998; Sanders & Horn, 1995; Sanders & Rivers, 1996). Moreover, a recent study conducted in Los Angeles Unified School District (LAUSD) investigated the relationship between English learner student achievement gains and the credential held by the teachers who taught them in 29 schools and 177 classrooms with large numbers of EL students. Hayes and Salazar (2001) found that "state/district authorization of teachers does have an impact on student outcome. For example, [Model B (Note 8)] students of teachers holding no state or district authorization achieved largely negative or very small positive...adjusted gains in reading and language" (pp. 37-38). (See Table 1). A follow up study of grades 1 – 3 classrooms in the same schools during the subsequent school year (2001) found again that “students of credentialed teachers out-performed students of emergency permitted teachers” (Hayes, Salazar & Vukovic, 2002, p. 90).

Table 1. Actual and Adjusted Gains by Teacher Authorization Grade 2, Selected Schools, LAUSD

<table>
<thead>
<tr>
<th></th>
<th>Actual Gains</th>
<th>Adjusted Gains</th>
<th>Actual Gains</th>
<th>Adjusted Gains</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCLAD</td>
<td>1.8 (n=142)</td>
<td>1.6 (n=142)</td>
<td>4.1 (n=148)</td>
<td>2.4 (n=148)</td>
</tr>
<tr>
<td>CLAD/LDS</td>
<td>2.0 (n=32)</td>
<td>2.7 (n=32)</td>
<td>1.0 (n=34)</td>
<td>0.4 (n=34)</td>
</tr>
<tr>
<td>SB1969 *</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>A Level®</td>
<td>1.8 (n=155)</td>
<td>1.6 (n=155)</td>
<td>0.3 (n=155)</td>
<td>-1.5 (n=155)</td>
</tr>
<tr>
<td>No Authorization</td>
<td>-2.4 (n=74)</td>
<td>-2.9 (n=74)</td>
<td>0.5 (n=93)</td>
<td>-1.8 (n=93)</td>
</tr>
</tbody>
</table>

*Actual and adjusted gains were not reported here due to the small sample size.
@ LAUSD certifies language competencies of its teachers if they do not already hold a BCLAD; A Level indicates fluent bilingual. Source: Hayes & Salazar (2001), page 36

Whereas 14 percent of teachers statewide were not fully credentialed, 25 percent of teachers of ELs were not fully certified (Rumberger, 2002). Figure 5 shows that as the concentration of ELs in a California school increases, so too does the percentage of teachers holding emergency credentials. Inasmuch as Figure 5 holds poverty constant, we would expect to see a flat line if the discrepancy in credentialed teachers were purely a function of poverty. These data show that English learners are significantly less likely to have a fully credentialed teacher than other low-income non-EL students. We will demonstrate that this is largely a problem of uneven distribution of qualified teachers among California's schools and classrooms.
Figure 5. The Relationship between the Percent of English Learners and the Percent of Teachers with Emergency Credentials, Holding Constant the Percent of Students on Free or Reduced Lunch, California Schools, 1999-2000

Note: Relationship estimated from the regression equation: $3.553 + .119 \cdot \text{LUNCH} + .095 \cdot \text{ELL}$ (N=6039), with LUNCH = 48.6 (sample mean).

Authorizations to Teach English learners

The current state of the art of teaching EL students employs three central methodologies for English learner instruction. The first strategy, specially designed academic instruction in English (SDAIE), is defined as “a set of systematic instructional strategies designed to make grade-level and advanced academic curriculum comprehensible to English learners with intermediate English language proficiency” (California Commission on Teacher Credentialing, 2001, p. 26). Another means of teaching EL students is through their primary language. Although the principal goal is to provide access to the core curriculum, in reality, this involves a continuum of strategies, from using the student’s primary language solely for clarification of concepts presented in English to actually providing academic instruction in the primary language. A third strategy is English language development (ELD). It is “systematic” instruction of English language that is designed to (1) promote the acquisition of English-listening, speaking and reading and writing skills—by students whose primary language is other than English, and (2) provide English language skills at a level that will enable equitable access to the core curriculum for English learners once they are presented with academic content. (CTC, 2001, p. A-8).
The California Commission on Teacher Credentialing (CTC) issues basically two EL credentials meant to ensure that teachers have skills in some or all of the above instructional strategies (see Table 4): the Bilingual, culture, language and development credential (BCLAD) and the Culture, language and development credential (CLAD). Many California teachers of English learners hold earlier versions of these specialized credentials that are generally considered equivalent and authorize them to teach English learners (Note 9).

Skills, knowledge, and instructional settings approved for each authorization

The most rigorous of the credentials, the bilingual, culture, language, and development (BCLAD) certification, requires that teachers have expertise in the areas of: 1) language structure, 2) methodology for first and second language development, and 3) cross-cultural competency. BCLAD teachers must also demonstrate competency in three additional spheres: 4) methodology for primary language instruction, 5 & 6) knowledge of a particular culture and language of emphasis. Many BCLAD teachers earn their expertise through a Master’s Degree program or through a credential program with an emphasis on teaching English learners infused throughout the program’s coursework and field placements.

BCLAD authorization requires extra expertise because it authorizes teaching in all settings with English learners. These teachers are authorized in the various methods of EL instruction for conveying academic content and promoting English language proficiency including primary language methods, "specially designed academic instruction in English" (SDAIE), and English language development (ELD). As speakers of a second language, these teachers tend to be more sensitive to the issues surrounding the acquisition of a second language and can communicate with students and parents in at least one language other than English. Thus, these teachers have a variety of skills to address a range of EL students’ educational needs.

The next most comprehensive authorization, the CLAD certificate or credential includes the first three skill areas required of the BCLAD teacher: 1) language structure, 2) methodology for first and second language development, and 3) cross-cultural competency. Expertise in these areas is gained through a set of four college courses—or by passing exams on this content. CLAD teachers should have some experience of learning a second language but are not required to have a command of that language or culture that is required for BCLAD certification. CLAD holders are authorized to teach subject matter to EL students using SDAIE and other English language methods, and to teach English language development.

Staffing EL classrooms with BCLAD or CLAD teachers allows English learners to remain in self-contained classrooms. Classrooms without CLAD or BCLAD teachers may require that EL students be removed for ELD (or academic support), so called pull-out instruction (Brisk, 1998). Despite being ubiquitous in English learner education, pull out instruction has been found to be among the least successful of instructional strategies for these students (Lucas, 1997; Ovando & Collier, 1998). Although BCLAD certification is the most comprehensive, it is also the rarest: Only 5% of California teachers who instruct English learners have a full credential with BCLAD authorization (UC LMRI, 2003).
“Teacher in Training” Status

According to the California Commission on Teacher Credentialing, the most widely used option to teach English learners is the “teachers in training” status, which does not require any certification. Rather, teachers in training are permitted by the California Department of Education to teach English learners using ELD and SDAIE methods based upon a mere agreement to obtain the requisite training for certification within two or three years. Teachers in EL classrooms who sign agreements that they are participating in or will obtain the requisite training are conditionally allowed to continue in their positions by the CDE. Unlike the various other certifications offered, the teachers in training status is not monitored by the Commission on Teacher Credentialing. Rather, this status was developed by the California Department of Education as part of a “plan to remedy” the shortage of teachers certified to teach ELs in school districts that were found by the Coordinated Compliance Review (CCR) to be out of compliance with matters concerning English learners. However, instead of remedying the shortage of certified teachers, the CDE’s re-labeling of untrained teachers has largely reinforced the status quo. Thus far, CDE monitoring and enforcement of these agreements has not resulted in any substantial reduction of the numbers of “teachers in training”.

Supply of EL Authorized Teachers in California

To determine whether the problem is one of sufficient numbers of teachers qualified to teach English learners, or simply a maldistribution of qualified teachers, we analyzed figures from the California Basic Educational Data System (CBEDS) for the year 1999-2000. CBEDS conducts an annual survey of every professional educator working in the public school system. Teachers are asked to indicate the type of California teaching credential they hold, including whether it is a “full” credential or an “emergency” credential. Teachers are also asked to indicate all the areas that their credential authorizes them to teach. We identified all teachers who indicated that they were authorized to teach in bilingual, English language development, or specially designed academic instruction in English (SDAIE) classes. We then compared the number of teachers with such special authorization to teach ELs with the number of EL students, both in the state as a whole and in each school that enrolled English learners. We also compared these figures with data on students who were not English learners and teachers without authorization to teach English learners.

The figures in Table 2 show that in the state as a whole, there were almost 6 million students and almost 300,000 teachers, which represents 20 students per teacher or 5 teachers per 100 students. There were also about 1.5 million English learners and about 79,000 "EL" teachers, that is, those with some kind of special authorization (BCLAD, CLAD, 1969/395) to teach them through the primary language and/or ELD, and/or SDAIE. Ignoring for the moment whether all of these authorizations are adequate to the task of teaching English learners, this represents about 19 students per EL teacher or more than five EL teachers per 100 EL students. These figures suggest that there are slightly more teachers with some specialized preparation per EL student in the state than the statewide student/teacher ratio. The same conclusion can be drawn if a similar analysis is done with only teachers who are fully authorized to teach English learners: there are actually more fully authorized EL teachers in the state per EL student than there are fully credentialed (non-EL) teachers per non-EL student. However, the language census data indicating how many EL students are actually taught by authorized CLAD or BCLAD teachers paints a
somewhat different picture. These data indicate a statewide average of only 4.2 CTC authorized EL teachers per 100 English language learners (California Department of Education, Education Demographics Office, Spring 1999 Language Census).

Table 2. California Students and Teachers by Language Background, 1999-2000

<table>
<thead>
<tr>
<th></th>
<th>English Learner</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>1,480,406</td>
<td>4,471,206</td>
<td>5,951,612</td>
</tr>
<tr>
<td>Teachers, including emergency permits/waivers</td>
<td>79,215&lt;sup&gt;a&lt;/sup&gt;</td>
<td>212,840</td>
<td>292,055</td>
</tr>
<tr>
<td>Students per teacher</td>
<td>18.7</td>
<td>21.0</td>
<td>20.4</td>
</tr>
<tr>
<td>Teachers per 100 students</td>
<td>5.4</td>
<td>4.8</td>
<td>4.9</td>
</tr>
<tr>
<td>Teachers excluding emergency permits/waivers</td>
<td>75,687&lt;sup&gt;a&lt;/sup&gt;</td>
<td>175,781</td>
<td>251,468</td>
</tr>
<tr>
<td>Students per teacher</td>
<td>19.6</td>
<td>25.4</td>
<td>23.7</td>
</tr>
<tr>
<td>Teachers per 100 students</td>
<td>5.1</td>
<td>3.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Fully credentialed bilingual/ELD teachers</td>
<td>69,305&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student per teacher</td>
<td>21.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers per 100 students</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully credentialed bilingual teachers</td>
<td>26,539&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students per teacher</td>
<td>55.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers per 100 students</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Teachers authorized in any way to teach bilingual education, English Language Development, or specially designed academic instruction in English (SDAIE), including those with SB1969 authorizations.

<sup>b</sup> Teachers authorized to teach bilingual education or English Language Development.

<sup>c</sup> Teachers authorized to teach bilingual education.


Comparing the numbers of teachers with the most rigorous training to teach English learners, those with BCLAD, bilingual specialist, or BCC credentials, the picture changes dramatically. Based on the same procedure as above, there are only 1.9 fully credentialed BCLAD equivalent teachers (i.e., those with the most comprehensive credential) for every 100 EL students versus 3.8 fully credentialed teachers per 100 non-EL students, or half as many. Under this scenario, the state would need another 26,000 teachers with the most comprehensive credentials to reach the same proportion as for non-EL students taught by teachers with the most comprehensive training.
Distribution of EL Teachers in California

While this statewide picture suggests that there are sufficient numbers of EL teachers with at least some authorization to teach English learners, it does not indicate how those teachers are distributed among schools. To investigate this issue, we classified schools based on the number of fully credentialed EL teachers they had for every 100 EL students. We divided schools into four groups: (1) schools with no EL teachers, (2) schools with a ratio of fewer than 2.5 fully credentialed EL teachers per 100 EL students—half the state average, (3) schools with a ratio between 2.5 and 7.5, and (4) schools with a ratio of more than 7.5—50 percent above the state average. We then computed how many schools were in each category and how many EL students attended those schools (Table 3).

Table 3. Number of English Learners by EL Teacher/Student Categories and Level, 1999-2000

<table>
<thead>
<tr>
<th>Fully Authorized EL teachers per 100 EL students</th>
<th>Elementary</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>No EL teachers</td>
<td>18,689</td>
<td>1.9</td>
<td>5,703</td>
</tr>
<tr>
<td>Fewer than 2.5</td>
<td>193,205</td>
<td>19.7</td>
<td>81,954</td>
</tr>
<tr>
<td>2.5 to 7.5</td>
<td>610,629</td>
<td>62.3</td>
<td>120,153</td>
</tr>
<tr>
<td>Greater than 7.5</td>
<td>157,331</td>
<td>16.1</td>
<td>24,671</td>
</tr>
<tr>
<td>Total</td>
<td>979,854</td>
<td>100.0</td>
<td>232,481</td>
</tr>
</tbody>
</table>

Source: 1999 CBEDS and 2000 Language Census

At the elementary level, more than 200,000 English learners—20 percent of the total—attend schools with 2.5 or fewer EL teachers per 100 English language learners. At the middle school level, more than 85,000 ELs attend such schools—almost 38 percent of the total. At the high school level, more than 75,000 attend schools with such low numbers of qualified EL teachers—almost one-third of all high-school EL students. Counting English learners who attend other types of schools (e.g., alternative, continuation, etc.), more than 390,000 English learners in California—one out of every four—attends a school with fewer than half the state average of teachers with specialized authorizations to teach them.

Another indication of the shortage of teachers with the appropriate training to teach English learners is revealed from an analysis of the 2000 Class Size Reduction (CSR) teacher survey (Stecher & Bohrnstedt, 2002). According to those data, 37 percent of all teachers who taught grades 1-4 in 2000 held a CLAD credential, 10 percent held a BCLAD credential, and 45 percent held either a CLAD or BCLAD (see Table 4). In general, the higher the concentration of English learners in the classroom, the higher the proportion of teachers who held at least some authorization to teach them. Yet among classrooms where a majority of students are English learners, only about half of the teachers held an appropriate EL credential. Using data on the proportion of English learners in each type of classroom, we estimate that only 53 percent of all English learners enrolled in grades 1-4 in California in the 1999-2000 school year were taught by a teacher with any specialized training to teach them (Note 11). If we assume that teachers with BCLAD credentials have...
the most appropriate training, only 22 percent of all English learners enrolled in grades 1-4 had such a teacher in 2000.

Table 4. Percent of Teachers in Grades 1-4 with CLAD and BCLAD Credentials By Classroom Concentration of English Learners, 2000

<table>
<thead>
<tr>
<th>Percent English Learners in the classroom</th>
<th>Percent of all English Learners</th>
<th>CLAD</th>
<th>BCLAD</th>
<th>CLAD or BCLAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>25</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>1-25</td>
<td>17</td>
<td>47</td>
<td>3</td>
<td>47</td>
</tr>
<tr>
<td>26-50</td>
<td>20</td>
<td>46</td>
<td>11</td>
<td>54</td>
</tr>
<tr>
<td>51-100</td>
<td>63</td>
<td>29</td>
<td>30</td>
<td>54</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>37</td>
<td>10</td>
<td>45</td>
</tr>
</tbody>
</table>

NOTE: Results are weighted.

Class size reduction had some largely unanticipated consequences for EL students because of the relative concentration of English learners in the state’s poorest schools. The migration of credentialed teachers away from these schools to those in more affluent areas with better working conditions was a significant feature of the class size reduction initiative in California (Stecher & Bohrnstedt, 2002). For example, the percentage of teachers not fully credentialed in schools with the smallest proportion of English learners (less than 8 percent) only increased from .3 percent in 1995-96 to 4.0 percent in 2000-01 (see Figure 6). However, the percentage in schools with the greatest proportion of English learners (40 percent or more) increased from 3.7 percent to 23.9 percent over the same five-year period. As a result, schools with the most English learners benefited the least from class-size reduction, at least in terms of access to fully credentialed teachers.

At the same time that EL students are less likely than others to have a qualified teacher, the challenges associated with teaching them are even greater than for the typical student. The large number of English learners who are immigrants frequently come from circumstances in which their early lives and education have been disrupted by war, loss or estrangement of family members, poverty, and residential mobility (Ruiz de Velasco & Fix, 2000; Olsen, 1998). As such, teachers must know how to intervene educationally with students whose personal and educational backgrounds are significantly different from the mainstream English-speaking student. Moreover, the age and grade placements of these students in U.S. schools often do not match their skill levels because of varying educational experiences in their countries of origin (Ruiz-de-Velasco & Fix, 2000).
Necessary Competencies of EL Teachers

Wong Fillmore and Snow’s (2000) study, entitled *What Teachers Need to Know about Language*, outlines the critical knowledge base that teachers must have for language learning in order to effectively teach children who do not speak standard English. They note that teachers need to know the units of language and how they operate differently across languages and dialects. For example, knowing how tense and plurality are formed in the child’s native language can help the teacher to uncover difficulties in English and facilitate learning for ELs. Wong Fillmore and Snow also argue that by knowing the fundamental characteristics of words in the primary language of the student, the teacher can facilitate more rapid acquisition of English vocabulary and word construction. They point out, for example, that if a teacher can explain that the suffix *idad* in Spanish has the same consistent meaning as *ity* in English, the student’s vocabulary and word usage can be expanded significantly. These authors also assert that teachers must understand the norms for language usage in the primary culture of the student in order to know how to encourage English learners in their acquisition of English. Another critical competency that Wong Fillmore and Snow argue teachers must have is a clear understanding of what constitutes *academic English* and how to support the acquisition of this particular form of the language for English learners. Academic English is the language of texts and often of tests, and it is not normally acquired in the course of conversation outside of academic contexts. For students who are not likely to “absorb” this form of English discourse in their homes or communities, it must be explicitly taught.

Of course, one of the most controversial of all topics in education is the best method for teaching reading. Many experts argue that there is no single best method. Rather there
are a number of strategies that are more or less effective with different students at different points in the process of learning (Snow, Burns & Griffin, 1998), and it requires the expertise of a well-trained teacher to know which strategy to use when, and with which children. There is even less agreement, however, on how best method to teach English learners to read in a language they do not understand—English. The National Research Council (Snow, Burns & Griffin, 1998) concluded that if reading instruction is not done initially in the primary language of the child, then educators should consider delaying it until English is acquired. This points out the degree to which the field continues to depend upon the skills of highly qualified teachers to make judgments about how best to teach reading to English learners. There simply are no “tried and true” strategies for teaching children to learn to read in a language they do not understand, and it is a vexing problem even to the experts in the field.

Finally, there are significant issues associated with the cultural backgrounds of immigrant and non-English speaking students that bear on how they learn. Wong Fillmore and Snow (2000) argue that a critical role for all teachers is to socialize students to the demands of schooling. Certainly, this is made more difficult if the teacher does not understand both the cultural and linguistic norms of the students he or she is teaching. They point out that in correcting some students, or encouraging others to participate in linguistically-based activities in the classroom, teachers may inadvertently squelch the motivation of English learners to participate at all. Without understanding the cultural and linguistic expectations of these students’ communities, teachers can undermine their students’ learning by failing to acknowledge culturally appropriate behavior. For example, many teachers reward students for questioning behaviors and active participation in discussion, but some immigrant students are socialized to believe that such behavior is inappropriate in the classroom (Olsen, 1997).

Teachers themselves have cited their need for greater expertise in working with EL students. In a survey of all 1999-2000 graduates of teacher credential programs in the California State University system (total of 10,512) one fourth responded that they felt they were only "somewhat prepared" or "not at all prepared" to teach English learners (Office of the Chancellor, 2002). We note that these are the "cream of the crop" of teachers of English learners—those who have completed a full credential and in most cases have training at least at the level of the CLAD (Culture, Language and Development preparation (CLAD) credential (Note 12).

Many teachers of English learners also report difficulty in communicating with the parents of their students. In a recent Harris survey (Note 13), 23 percent of teachers of English learners reported that they had a hard time communicating with their English learners’ parents about their children’s educational progress and needs (Table 5). Not surprisingly, teachers with no special preparation to teach English learners were more likely to report difficulty, while most teachers with BCLAD credentials reported that they were able to communicate with their students’ parents. It is also notable that in the Hayes et al. (2002) study of the LAUSD implementation of Proposition 227, the largest concern noted by non-English speaking parents was lack of communication with teachers.
Table 5. Percent of teachers with EL students in their classes who reported difficulty in communicating with parents by teacher credential, January 2002

<table>
<thead>
<tr>
<th>Teacher credential</th>
<th>Percent reporting difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAD (or equivalent)</td>
<td>25</td>
</tr>
<tr>
<td>BCLAD (or equivalent)</td>
<td>7</td>
</tr>
<tr>
<td>SB-1969/395 Certificate</td>
<td>10</td>
</tr>
<tr>
<td>None</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
</tr>
</tbody>
</table>

NOTE: Results exclude respondents who did not answer question or answered “not sure.” Results are weighted. Overall differences are statistically significant at .05 level or better. Source: Harris Survey of a Cross-Section of California School Teachers, January 2002 (N=820).

A common critique of teacher preparation programs, both in California and elsewhere, is that the extant knowledge of how to teach English learners is not often incorporated into teacher preparation efforts (Wong-Fillmore & Snow, 2000; Reagan, 1997; Tomas Rivera Center, 1994; Milk, 1990). In effect, we know considerably more about how to prepare teachers than we act on in schools of education. This is generally viewed as a problem in translating research into practice. The reasons for this have been debated at great length in the education literature (cf. Cochran-Smith & Fries, 2001), but the only firm conclusion that can be drawn is that there is a clear disjunction between research and practice in teacher education. It is nowhere more painfully evident than in the preparation of teachers for English learners where it is commonly argued that the field lacks research-based methods, when in fact this is not the case (cf. August & Hakuta, 1997; Gándara & Maxwell-Jolly, 2000).

**Working Conditions for EL Teachers**

Given the opportunity, teachers vote with their feet for where they want to work, and school conditions appear to influence this vote. Recent research suggests that working conditions influence teachers’ decisions about where to teach more than do salaries (Hanushek, Kain, & Rivkin, 2001; Loeb & Page, 2000). Data for California demonstrate this clearly. Table 6 demonstrates that the differences between conditions in schools with high and low concentrations of EL students are dramatic, even with respect to characteristics that would not intuitively seem to be related to the concentration of English learners. However, it is evident that when working and learning conditions are poor, they affect the attitudes of staff, and no doubt the ability of the school to attract competent and amiable people to work there.

Given the difficult working conditions and the added demands placed on teachers of English learners, it would be expected that both training and guidance on how to address these challenges would be provided. The data, however, show otherwise. Teachers of English learners are largely left to fend for themselves with inadequate guidance, resources, and training.
Table 6. Characteristics of the Environment of California Elementary Schools by EL Concentration, Spring 1999

<table>
<thead>
<tr>
<th>Problems in neighborhood where school is located:</th>
<th>25% or less</th>
<th>Over 25%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling or using drugs or excessive drinking in public</td>
<td>16</td>
<td>50</td>
<td>29</td>
</tr>
<tr>
<td>Gangs</td>
<td>32</td>
<td>77</td>
<td>50</td>
</tr>
<tr>
<td>Crime</td>
<td>24</td>
<td>77</td>
<td>45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School climate:</th>
<th>25% or less</th>
<th>Over 25%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents not active in programs</td>
<td>4</td>
<td>40</td>
<td>18</td>
</tr>
<tr>
<td>Problem with overcrowding</td>
<td>25</td>
<td>50</td>
<td>34</td>
</tr>
</tbody>
</table>

Note: Results are weighted (S2SAQW0). All column differences are statistically significant at .05 level or better.
SOURCE: ECLS base year data for California public elementary schools (N=69).

(2) Inadequate professional development opportunities to help teachers address the instructional needs of English learners.

Although there are no studies that are able to demonstrate a causal relationship between student achievement outcomes and teacher professional development, the relationship between teacher preparation and student achievement (see, for example, Darling-Hammond, 2002) suggests that such a relationship probably does exist. Moreover, a number of studies have demonstrated that good professional development increases teachers’ sense of competence and provides them with tangible strategies for better meeting the needs of their students (Herman & Aguirre-Munoz, 2003; Herman, Goldschmidt, & Swigert, 2003). Given these findings, teacher professional development has been a cornerstone of many states’ education reform plans, including California’s. Yet, surprisingly little emphasis has been placed on the specialized needs of teachers of English learners.

The instructional demands placed on teachers of English learners are intense. They must provide instruction in English language development while simultaneously or sequentially attempting to ensure access to the core curriculum. Yet data collected for California’s Class Size Reduction Study (Stecher & Bohnstedt, 2000) show that even where teachers are teaching a majority of English learners, the professional development they receive that is dedicated to helping them instruct these students is minimal. The percent of professional development time that teachers reported focusing on the instruction of English learners in 1999-2000 ranged from 3 to 10 percent with a mean of only 7 percent (Table 7).
Table 7. Professional Development of Teachers in Grades 1-4 by Classroom Concentration of English Learners, 1999-2000

<table>
<thead>
<tr>
<th>Percent English Learners in the classroom</th>
<th>Mean number of days</th>
<th>Mean number of hours</th>
<th>Percent of hours on teaching English Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3.5</td>
<td>28</td>
<td>3</td>
</tr>
<tr>
<td>1-25</td>
<td>3.6</td>
<td>30</td>
<td>8</td>
</tr>
<tr>
<td>26-50</td>
<td>3.3</td>
<td>32</td>
<td>9</td>
</tr>
<tr>
<td>51-100</td>
<td>3.8</td>
<td>35</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>3.6</td>
<td>31</td>
<td>7</td>
</tr>
</tbody>
</table>

Number of hours estimated by recoding responses (8 hours or less = 4 hours; more than 8 = 12 hours). Note: Results are weighted.

These data are corroborated by several other recent studies. Hayes and Salazar (2001), in their study of 177 classrooms in the LAUSD, noted that teachers discussed “the problematic lack of resources and training to assist them to provide quality services to ELLs (p23).” A report on the results of a California Department of Education (CDE, 1999) survey of every California school district during the first year of Proposition 227 implementation showed that professional development to help teachers with English learner instruction was one of the most significant unmet needs in the aftermath of the passage of the proposition. The later, more ambitious, study of the implementation of Proposition 227 being conducted by American Institutes for Research (Parrish, et al., 2001, 2002) likewise reports a similar theme emerging from their investigation. The study documents a significant lack of guidance from the state about the nature of the instruction that should occur in the Structured English Immersion classrooms, and as a result, “teachers were not provided appropriate materials or guidance on how to use materials appropriately” (Parrish, et al., 2001, p. 36). Again, in the most recent report of this five-year study, researchers concluded that, “Barriers to the implementation of the Proposition include insufficient guidance for implementing regulations in the law; confusion over what the law requires and allows; and lack of clear operational definition for the various instructional approaches for EL students. In particular, educators lack clarity on what constitutes best practice within structured English immersion instruction” (Parrish, et al., 2002, p. ix).

The University of California has provided professional development for the state’s teachers through its Professional Development Institutes (CPDIs). This is not the only professional development activity in the state, in fact, many districts sponsor extensive professional development programs, but it is the largest state-wide effort, with more than 45,000 teachers participating in these workshops in 2000-01. In that same year, a total of $50,866,000 was provided for this purpose. Of this amount, only $8,358,104 was earmarked for professional development in the area of English Language Development (Office of the President, University of California, 2002). This constituted about 16% of the professional development budget, although English learners constitute fully 25% of the students in the state, and as we have argued, are the most educationally deprived by their schools of all students. The AIR study found that only 18% of the teachers in their sample had even heard of the ELD CPDIs, and only 8% had attended one or more (Parrish, et al, ...
suggesting that relatively little is done to disseminate information about resources that may be available to teachers of English learners.

3. Inequitable access to appropriate assessment to measure EL achievement, gauge their learning needs, and hold the system accountable for their progress (Note14)

While English learners must be incorporated into a state accountability system in order to insure that their educational needs are being met, the current system is of little value for monitoring their academic progress.

English Language Testing of the Academic Progress of English Learners

According to the National Academy of Sciences, “when students are not proficient in the language of the assessment (English), their scores on a test in English will not accurately reflect their knowledge of the subject being assessed” (NRC, 1999, p. 214). Therefore such assessments provide neither accurate data for accountability purposes, nor do they help teachers to enhance their instruction. As the National Research Council noted, “if a student is not proficient in the language of the test, her performance is likely to be affected by construct-irrelevant variance—that is, her test score is likely to underestimate her knowledge of the subject being tested” (NRC, 1999, p. 225). These tests can, moreover, have serious negative effects on the schooling of English learners in at least two ways: (1) positive changes in test scores over time can give the inaccurate impression that students have gained subject matter knowledge when, in fact, they may have simply gained proficiency in English. This misperception that EL students are making academic progress can lead schools to continue providing a curriculum that fails to emphasize comprehensible subject matter. (2) On the other hand, consistently low scores on tests can lead educators to believe that students need low-level or remedial education, when in fact, they may have mastered the curriculum in another language, but are unable to express these competencies through an English language test.

The current state accountability practice for English learners is as follows:

- All EL students in Grades 2-11 must take the Stanford 9 (SAT 9) (Note 15), a nationally norm-referenced test in reading and math (and science and social studies in the higher grades) administered in English, unless parents or a guardian provides a written request for a waiver.
- Only “ELLs who have been in the district for 12 months or more may not use nonstandard accommodations unless they have individualized education plans (IEPs) or Section 504 plans that include accommodations.” (Note 16)
- English learners who have been in a district for less than one year (except for entering ninth graders in high school districts as of 2000) are excluded from the Academic Performance Index (API). (Note 17)
- The API is used to measure each school’s performance based on student test scores. Through the Governor’s Performance Award (GPA) Program, there are monetary and non-monetary awards based on positive changes in the API. In addition, through the Immediate Intervention/Underperforming Schools Program (II/USP), failing schools are identified for local and state intervention to improve programs.
“Spanish-speaking English language learners who had been enrolled in California public schools less than 12 months when testing began [are] required to take the SABE/2 in addition to taking the Stanford 9...” (Note 18)

Finally, the CAHSEE is the gatekeeper of graduation that all students, including English learners and other students with exceptional needs, must pass in order to receive a high school diploma (as of 2007).

The exclusive reliance on an English-language norm-referenced achievement test for EL students is inappropriate for these students (Note 19) and violates several standards established by the authoritative AERA/APA/NCME Standards for Educational and Psychological Testing. (Note 20)

Research on second language acquisition shows that it takes English learners on average between four to seven years to meet various standards of English proficiency (Hakuta, Butler & Witt, 2000). The burden is on the state to demonstrate that test scores for English learners who have been in the United States for less than four years are valid, yet the state has not made any attempt to obtain information to shed light on this question (Note 21).

The only cautionary statement by the CDE on the interpretation of standardized test scores appears on a web page and says: “Since the Stanford 9 norming sample was representative of the United States as a whole, it does not necessarily match California's student population.” (Note22) There is no acknowledgement such as that of the San Diego Education Association that explicitly states that the California population is vastly different from the norming group: “The norming sample, while representative of the nation, does not reflect the huge diversity of California's student population. For example, 40.5% of California's students are Hispanic, but only 9.6% are in the Stanford 9 norming sample. While 24.6% of the state's students are of limited English proficiency, only 1.8% are in the sample.” (Note 23) Since the test scores are reported with respect to the national percentile rank (NPR), failure to issue an explicit warning with respect to Hispanics and to English learners is a clear violation of this standard.

The state requires the collection of data using a comparable test in Spanish, the SABE/2. However, the state gives no guidance on how this information might be used to augment information from SAT 9. Indeed, while requiring SABE/2 for Spanish speaking students who have been in the U.S. for less than 12 months, the Department of Education explicitly rejects the use of SABE/2 in its Academic Performance Index (API) and does not monitor its administration. (Note 24) Among the reasons for this according to the Superintendent's Advisory Committee for the Public Schools Accountability Act of 1999 is that “SABE/2 is not aligned with state content standards”, leading to “consensus in the API subcommittee to not include the SABE/2 in the 1999-2000 API.” (Note 25) That SABE/2 is not aligned with the state content standards is uncontestable. But neither was the SAT 9 at the time the API system was developed. More recently, the SAT 9 has been augmented with new and revised items to bring it into alignment with state standards, and in fact, a new test is being developed that will be in even greater alignment. The same could be done with the SABE/2 or another similar achievement test in Spanish. Given the importance of API as a policy instrument in driving rewards and sanctions for school academic performance, it is indefensible that the state makes no provisions for the use of information from a native language test, indeed one that the state requires (on paper only) students to take. This point is made particularly salient by the discrepancies between English learner scores on...
the SABE/2 and on the SAT 9. Well over half (59%) of all 4th graders taking the SABE/2 reading test in 2001 scored at or above the 50th percentile on this test, which was normed on a Spanish-speaking population. In contrast, only 15 percent of English learners in the 4th grade performed as well on the SAT 9 (Note 26). The tests are not strictly comparable, but the discrepancies raise serious questions about the appropriateness of current practice of educational planning based on clearly faulty and incomplete information about what EL students know and need to know.

California English Language Development Test (CELDT)

The CELDT test of English language development was developed to make it possible for educators to assess the level of English proficiency of their English learners. Administered for the first time in 2001, the test, developed by CTB-McGraw Hill, and designed to assess English learners in grades 1 through 12 on reading, writing, comprehension, and oral English along a continuum of five levels, from Beginning (1) to Advanced (5). The purpose of the test is to monitor the growth of students' English skills over time and to provide a single statewide measure useable for both program placement and reclassification to the status of English proficient. Prior to the development of the CELDT, school districts used a variety of different tests which did not align with each other and provided no consistent basis for monitoring student progress (Gándara & Merino, 1994). While the CELDT was warmly received by educators of English learners as a potentially useful assessment tool, it suffers from at least two major limitations. It was so time-consuming to administer that it placed a significant burden on schools. In addition, scores were not available in a timely enough fashion to allow educators to use the information for program purposes (Note 27). As a result of these limitations, the CELDT has been revised by CTB-McGraw Hill. The restructured CELDT, form C, is being administered at the time of this writing. To what extent this makes it impossible to compare scores from 2001 to 2003 is not yet known.

California High School Exit Exam

EL students are much less likely to pass the High School Exit Exam (CAHSEE) than are English speakers (Note 28). Students with exceptional needs as defined in Title 20 of federal law may take the exams with accommodations to meet their special needs. However, English learners do not have exceptional needs according to this definition and do not therefore qualify for accommodations in the state of California. The law does allow for districts to defer the requirement that students pass the exam until the pupil has completed six months of instruction in reading, writing, and comprehension in the English language. Nonetheless, no student, including those who are still classified as English learners, will receive a high school diploma without passing the exit examination in English.

An important feature of the law authorizing the CAHSEE is a requirement that the exam have curricular and instructional validity:

(2) "Curricular validity" means that the examination tests for content found in the instructional textbooks. For the purposes of this section, any textbook or other instructional material adopted pursuant to this code and consistent with the state's adopted curriculum frameworks shall be deemed to satisfy this definition.
"Instructional validity" means that the examination is consistent with what is expected to be taught. For the purposes of this section, instruction that is consistent with the state's adopted curriculum frameworks for the subjects tested shall be deemed to satisfy this definition (Education Code Section 60850, f, 2 & 3).

The evidence that EL high school students do not receive the same instruction or have access to the same range of courses as their English-speaking peers puts in serious question the curricular validity of these tests for English learners. Moreover, evaluation of the early administrations of the test found that passing rates on the math exam are significantly correlated with completion of Algebra I (Wise, et al., 2002). Yet, EL students are often on a high school trajectory of ELD and basic classes that does not include algebra (Callahan, 2003). Furthermore, the condition of these students as English learners—students who by definition do not have the same level of understanding of all-English instruction as fluent English proficient students—raises questions about the instructional validity of the exam. This is particularly true for EL students in classrooms with teachers who do not have special certification or preparation in English learner teaching strategies. Unfortunately, the dearth of such prepared teachers (discussed in Section 2) is even greater at the secondary than the elementary school level.

Accommodations

When English tests are used to assess English learners, it is common practice in many states to use accommodations. Examples of test accommodations include using a parallel form of the same test content in the native language, administering the test in small groups, repeating directions, having a person familiar with the child’s language and culture give the test, giving more time breaks, reading questions aloud in English, translating directions, extending the session over multiple days, simplifying directions, and using word lists or dictionaries (National Research Council, 1999: 218). California, however, does not allow accommodations for those EL students who have been here for over one year. CDE guidelines state:

English Language Learners may use nonstandard accommodations only if the local board of education adopts a policy before testing begins that includes the criteria each school is to use to identify ELLs eligible to use nonstandard accommodations. ... After the policy is adopted English Language Learners who will have been enrolled in the district less than 12 months when testing begins may use any of the nonstandard accommodations including having the directions translated and using bilingual dictionaries. ELLs who have been in the district for 12 months or more may not use nonstandard accommodations unless they have IEPs or Section 504 Plans that include accommodations.” (Note 29) Yet since the API index counts only those English learners who have been here for over one year, the API does not include assessment results for students who were allowed by a local school board to use accommodation practices.

The need for making accommodations available by at least allowing EL students additional time is clear from inspection of the data on the number of items and the time allotted, according to a table available on the CDE website (Note 30). For example, the reading vocabulary section of the test, at each grade level, has 30 items given in an allotment of
20 minutes and for reading comprehension there are 54 items to be completed in 50 minutes for most grades. This pattern is also found in the mathematics items. That is to say, the speed of the test is less than one minute per item. While this may be sufficient for native speakers of English, this is hardly sufficient for most English Learners, particularly given that tests such as the SAT 9 purport to be tests of achievement (or "power"), not of speed.

(4) Inadequate instructional time to accomplish learning goals

There is a significant body of research that shows a clear relationship between increased time engaged in academic tasks and increased achievement. Carroll (1963) devised the classic model that showed learning is a function of the amount of time needed to learn something divided by the amount of time allotted to learn it. Others have attempted to make sense of the different ways that time can be used productively in learning. Berliner (1990) argues that “time on task” is different from “academic learning time”, with the latter resulting in greater achievement gains than the former. Karweit (1989) has shown that “engaged time” on task, which is akin to academic learning time, is more important than simply the time allotted, as in the Carroll model. All of these models, however, suggest that there is a relationship between time and learning, and that learning increases when students are optimally engaged in learning activities for greater amounts of time. Notwithstanding the importance of time for learning, there are many ways in which English learners experience less time on academic tasks than other students:

- With the passage of Proposition 227, English learners who enroll in a California school for the first time must remain in a structured English immersion program for at least 30 days before being assigned to a permanent classroom. In a recent study of schools implementing the proposition, many teachers complained that they did not know what to do with students during this interim period and that a great deal of instructional time was lost trying to accommodate students who would not be continuing on in the same classroom. Particularly where parents had sought a waiver to have their child attend a bilingual classroom, teachers reported not knowing how to instruct these students. They lacked the necessary curricula and materials for the 30 days of all-English instruction before they began what would be their bilingual program for the remainder of the school year (Gándara et al, 2000).

- A common way that elementary schools organize instruction for English learners is to take them out of their regular classes for English language development. This strategy has been demonstrated to create further inequities in the education of “pulled out” students because they miss the regular classroom instruction (Cornell, 1995; Fleishman & Hopstock, 1993; Anstrom, 1997). Nevertheless, the practice continues to be relatively routine for English learners. There is generally no opportunity for students to acquire the instruction they have missed during the pull out period (Lucas, 1997; Ovando & Collier, 1998).

- In secondary schools English learners are often assigned to multiple periods of English as a Second Language (ESL) classes while other students are taking a full complement of academic courses. Commonly, when not enough courses are available in either SDAIE or other formats, students are given shortened day schedules, resulting in significantly less time devoted to academic instruction (Olsen, 1997).

- Classrooms with large numbers of English learners also have fewer assistants in them to help the teacher provide individualized time for the students. Table 8
shows the number and types of person hours devoted to classrooms by percent EL.

Table 8. Hours of Assistance on Instructional Activities in Classrooms of Teachers in Grades 1-4 by Type and Classroom Concentration of English Learners, 1999-2000 (Mean hours)

<table>
<thead>
<tr>
<th>Percent English Learners in the classroom</th>
<th>Regular aides</th>
<th>Special education aides</th>
<th>LEP or bilingual aides</th>
<th>Parents or adults</th>
<th>Students</th>
<th>Other specialists</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3</td>
<td>2</td>
<td>&lt;1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>1-25</td>
<td>3</td>
<td>1</td>
<td>&lt;1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>26-50</td>
<td>2</td>
<td>&lt;1</td>
<td>2</td>
<td>&lt;1</td>
<td>1</td>
<td>&lt;1</td>
<td>7</td>
</tr>
<tr>
<td>51-100</td>
<td>3</td>
<td>&lt;1</td>
<td>2</td>
<td>&lt;1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>

NOTE: Results are weighted.

While the district is apt to provide more bilingual aide time for classrooms with high percentages of English learners, there is significantly less time spent in these classrooms by parents or other adults. The result is that classrooms with no or few English learners enjoy more adult time in the classroom, which means that more of these children will receive individualized instructional attention, exacerbating the gaps in instruction and achievement outcomes between English learners and English speakers. While it is not necessarily the school’s or the district’s “fault” that some schools enjoy more parent participation, it is a fact that must be considered in distributing resources among schools. Furthermore, when EL students are taught by bilingual teachers, these teachers are provided with much less paraprofessional assistance than their non-bilingual colleagues. In the view of many teachers this constitutes “penalizing” the most prepared teachers, and their students, for their extra expertise.

English learners in California are also more likely to be assigned to multi-track year round schools designed to accommodate more students on a campus. The year round plan that accommodates the most students is Concept 6, a schedule in which students attend school for only 163 days per year, instead of the 180 mandated by state law (Note 31). As Table 9 shows, English learners comprise fully half of the students assigned to Concept 6 schools. Students on the Concept 6 calendar attend school for 4 months twice a year, with two month breaks in between. This provides English learners less time to assimilate critical academic material and to be exposed to English language models. Just as important, however, is the loss of learning that occurs with two months breaks in school every 4 months. A significant body of research has now established that low income children (and English learners) are more disadvantaged by these lengthy breaks from school than middle income children. There is a demonstrably negative effect on their achievement (Cooper et al., 1996). Thus, the very students who need the most exposure to schooling, to English language models, and to opportunities to “catch up” to their English speaking peers are more likely to be assigned to school calendars that provide
them with fewer school days than other students and less exposure to English in a school setting.

Table 9. Distribution Characteristics of California Schools, 2001 Percent English Language Learner Enrollment by School Calendar

<table>
<thead>
<tr>
<th>Measure</th>
<th>Statistic</th>
<th>Traditional/ Single-Track</th>
<th>Multi-Track Not Concept 6</th>
<th>Multi-Track Concept 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent English Learners</td>
<td>Mean</td>
<td>21</td>
<td>36</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>15</td>
<td>35</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>Number of Schools</td>
<td>5,913</td>
<td>735</td>
<td>221</td>
</tr>
</tbody>
</table>

Source: California Department of Education, Policy and Evaluation Division (http://cedata.com.hosting.pacbell.net/api2001base/dbapi01b.zip) and School Facilities Planning Division (http://www.cde.ca.gov/facilities/yearround/direct00.htm)

(5) Inequitable access to instructional materials and curriculum

All students need appropriate instructional materials. While some might argue that textbooks and other appropriate learning materials are not essential to learning, Oakes and Saunders (2002) have argued cogently that the preponderance of research evidence demonstrates a clear link between appropriate materials and curriculum and student academic outcome. English learners, however, need additional instructional materials in two areas. First, all English learners need developmentally appropriate materials to learn English and to master English Language Development standards. Second, English learners receiving primary language instruction need appropriate materials in their native language. However, the evidence suggests that many are not gaining access to such materials. In the second year report of the AIR study, researchers report that 75% of the teachers surveyed said they “use the same textbooks for my English learner and English only students” and fewer than half (46%) reported using any supplementary materials for EL students (Parrish, et al., 2002, p. IV-34). This raises the question of how much EL students can be expected to learn without materials adapted to their linguistic needs. It is not particularly surprising then that only 40.9% of teachers report they are “able to cover as much material with EL students as with EO students” (Parrish, et al., 2002, p. IV-35). There is ample evidence in the research literature that when students cover less material than their peers, their skills decline relative to other students and they are prone to be placed in low academic groupings or tracks where educational opportunities are limited (Barr & Dreeben, 1983; Oakes, 1985; Goodlad, 1984; Gamoran, 1992).

The quality of instructional materials appears to differ by concentration of English learners in the school as well. Data from the Harris survey show that teachers with high percentages of English learners are less likely than teachers with low percentages of English learners to have access to textbooks and instructional materials, in general, and materials needed by English learners in particular. Almost half of teachers with high percentages of English learners report that the textbooks and instructional materials at
their schools were only fair or poor compared to 29 percent of teachers with low percentages of English learners (Table 10). Teachers with high percentages of English learners were also almost twice as likely as teachers with low percentages of English learners to report that the availability of computers and other technology was only fair or poor. Moreover, almost two-thirds of teachers with high percentages of ELs in their classes reported not enough or no reading materials in the home language of their children and more than one quarter reported that they did not have any or enough reading materials at students reading levels in English.

Table 10. Condition and Availability of Instructional Materials in California Schools by Percentage of English Learners in Teachers’ Schools or Classrooms, January 2002 (percent of teachers reporting condition)

<table>
<thead>
<tr>
<th></th>
<th>School EL</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25% or less</td>
<td>Over 25%</td>
<td>Total</td>
</tr>
<tr>
<td>Reported by all teachers (N=1071)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textbooks and instructional materials are ONLY FAIR OR POOR</td>
<td>14</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>Availability of computers and other technology is ONLY FAIR OR POOR</td>
<td>26</td>
<td>40</td>
<td>31</td>
</tr>
<tr>
<td>Classroom EL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reported by teachers who have EL students in their classes (N=829)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not enough or no reading materials in home language of children</td>
<td>44</td>
<td>68</td>
<td>51</td>
</tr>
<tr>
<td>Not enough or no reading materials at students reading levels in English</td>
<td>19</td>
<td>29</td>
<td>22</td>
</tr>
</tbody>
</table>

NOTE: Results exclude respondents who did not answer question or answered “not sure.” Results are weighted. All column differences are statistically significant at .05 level or better.

Weak Curriculum

There is a significant body of research on tracking that connects the rigor of instruction to students’ academic outcomes (Mickelson, 1999; Oakes, 1985; Page; 1990). The negative effects of low-track instruction are doubly detrimental for ELs who enter the classroom already at a linguistic disadvantage (Callahan, 2003; Harklau, 1994; Katz, 1999). There is a common perception that English learners are clustered in the early years of school, and so most attention is applied to students in this age group. However, about one-third of English learners in California are found in grades 7 – 12. And, these students are often shortchanged by their schools because of lack of appropriate coursework offerings or materials to support courses for English learners. In secondary schools, English learners are often assigned to multiple periods of ESL or ELD classes while other students are taking a full complement of academic courses. Commonly, when not enough courses are available in either SDAIE or other formats, students are given shortened day schedules, resulting in significantly less time devoted to academic instruction (Olsen, 1997).
We selected a random sample of transcripts of secondary English learners from two different northern California districts. In district #1, we compared a random sample of English learners with a random sample of English speaking students. For English only students (20) with GPAs from 1.6 to 4.1, 58% of their courses were college preparatory. For the English learners (8), with GPAs from 1.3 to 3.3 (this was the upper bound of the GPA range for English learners), 21% of their courses were college preparatory. The following are samples of English learner programs for the sophomore and senior years:

District #1

Saul (2 years in U.S., attended 9th grade in Mexico where he was in a college preparatory curriculum and took advanced mathematics courses)
Sophomore year (2001):

Period 1: No class
Period 2: Language Development 1
Period 3: Language Development 2
Period 4: Native Spanish 1
Period 5: U.S. History (in Spanish)
Period 6: Math A (general, low level)
Period 7: Weightlifting

(Two courses meet college preparatory requirements: Spanish and U.S. History. No science is provided.)

Jose Luis (1 year in the U.S. Uneven academic history prior to immigration)
Sophomore (2001):

Period 1: No class
Period 2: Language Development 1
Period 3: Language Development 1
Period 4: General Math (in English)
Period 5: Native Spanish 1
Period 6: Drawing 1
Period 7: No class

(One class prepares student for college requirements: Spanish. No science or social science offered. Student failed English only math because he could not understand the teacher.)

District #2

Marcos (Long term EL student, enrolled in California schools prior to entering high school). Sophomore (2000):

Period 1: English 10 SDAIE
Period 2: World History SDAIE
Period 3: Pre Algebra A SDAIE
Period 4: Court Sports
Period 5: Integrated Science 2 SDAIE  
Period 6: ELD 5  

(Only two courses could be used to meet college preparatory requirements: World History and Integrated Science as an elective, not as a science course. Student never took a college preparatory science, math or English course through the junior year of high school.)

Marisela (Long term EL student, enrolled in California schools prior to entering high school) Senior year (2002):

Period 1: Power English  
Period 2: Weight training  
Period 3: ELD 5C  
Period 4: Business Math  
Period 5: Consumer Foods  
Period 6: Floral Design  

(None of the student’s courses meets college preparatory criteria. The student took no laboratory science or math beyond Algebra 1, which she failed and received no credit.)

These are students who have been attending California schools with caring administrators and school personnel, but the schools did not have the resources—human or otherwise—to provide an appropriate program of study for these students. They were selected randomly from among a pool of students like them for illustrative purposes, but they represent typical scenarios in many of California’s high schools.

Because the state does not effectively monitor the quality of instruction that English learners receive, or the amount of time they spend in Structured English Immersion settings, we do not know to what extent the educational services provided for these students meet high standards of quality. We can guess at this figure, given the large numbers of unprepared teachers who teach them. It is worth noting, however, that more than 82,000 English learners in California receive no special instruction whatsoever. For some of these students this is based on parental request, but even this requires greater scrutiny. The AIR study of the implementation of Proposition 227 (Parrish, et al, 2002) noted that there remained a great deal of confusion among parents about what options existed for them, and that “in some cases, teachers are discouraged from discussing educational alternatives for students” (p. IV-41). In this environment, some parents are certainly making uninformed decisions about their children’s educational program. The state has not monitored the extent to which schools and districts provide full disclosure to parents about the programs they may and do offer.

**Over-placement in Special Education resulting in weak curriculum**

The persistent and pervasive inequities in access to well-prepared teachers, school resources and facilities, appropriate assessment and time to accomplish learning goals result in large and growing gaps in achievement for English learners vis-à-vis their English speaking peers, and ultimately to misplacement into some special education classes. In the consent decree resulting from the *Diana v California State Board of Education* (U.

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S. D. C., ND, Cal.1970), a class action suit on behalf of English learners inappropriately placed in special education, the state agreed to the following:

- To test Mexican American children in their own language and in English
- To test them on the non-verbal sections of intelligence tests
- To re-test all Mexican American who are in Educable Mentally Retarded (EMR) classes using non-verbal sections of intelligence tests
- Develop and norm a test of IQ that reflects Mexican American culture
- Require school districts throughout the state that show a significant disparity between their overall district racial-ethnic representation and the racial-ethnic representation in their EMR classes to submit an explanation for the overrepresentation.

Thirty years hence the State of California has still not acted to implement the consent decree with respect to the development of appropriate assessment for English learners that could stem the over diagnosis and placement of these students in special education. Nor does California keep reliable data on the numbers of EL students in special education. About to be published is a study based on data from eleven school districts and over 700,000 students in the Los Angeles area for the 1998-99 school year. The researchers, Artiles and Rueda (in press) report that “ELs are over-represented in special education, particularly in specific learning disabilities (SLD) and language and speech impairment classes (SLI), especially at the secondary grade level where language support is minimal” (pg.2). Even more distressing is that, “highly vulnerable ELs (those who have low proficiency in both English and their primary language) are 1.5 times more likely to be diagnosed as Speech Impaired and Learning Disabled than their English speaking peers during the elementary school years. During the high school years, “highly vulnerable ELs” are twice as likely to be diagnosed as Mentally Retarded, Speech Impaired, and Learning Disabled. The state of being highly vulnerable—or having low proficiency in two languages—is often a product of inadequate instruction, just as proficiency in at least one language is the usual outcome of schooling and this is true for all children, regardless of their ability level. We know, for example, that many mentally disabled children acquire a reasonable proficiency in their primary language (Rueda, R. & Smith, 1983; Whitaker, Rueda, & Prieto, 1985). Table 11 shows that English learners and highly vulnerable English learners are significantly over-represented in special education programs in the sampled districts.

As was the case with the 1982 report by the National Academy of Sciences (Heller, Holtzman & Messick, 1982), an important finding is underscored by Artiles and Rueda: where there are few if any primary language support services offered, special education misdiagnosis and misplacement tends to occur. This is almost certainly related as well to the inequitable distribution of psychologists in the schools who can meet the assessment needs of English learners. The National Association of School Psychologists reports that only 160 out of all school psychologists in California report having bilingual competency. There are currently 1,949 school psychologists employed in California schools. If all of the bilingual psychologists were employed in the schools (which they almost certainly are not) then only 8% of psychologists would be bilingual and capable of conducting an assessment in a student’s primary language. And, if all of these psychologists were assigned only to English learners, then 8% of the psychologists would be assessing 25% of the students.
Table 11. Percent Students in Special Education, Elementary (K-5) & Secondary (6-12) Compared to Percent of Total School Population by language status and White (non EL), 11 Los Angeles Area School Districts

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Typical EL</th>
<th>Highly Vulnerable EL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elementary</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9%)*</td>
<td>(28%)*</td>
<td>(22%)*</td>
<td></td>
</tr>
<tr>
<td>SLI</td>
<td>14%</td>
<td>17%</td>
<td>48%**</td>
</tr>
<tr>
<td>SLD</td>
<td>13%</td>
<td>29%</td>
<td>48%**</td>
</tr>
<tr>
<td><strong>Secondary</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(12%)*</td>
<td>(12%)*</td>
<td>(13%)*</td>
<td></td>
</tr>
<tr>
<td>MMR</td>
<td>14%</td>
<td>9%</td>
<td>26%**</td>
</tr>
<tr>
<td>SLI</td>
<td>11%</td>
<td>10%</td>
<td>27%**</td>
</tr>
<tr>
<td>SLD</td>
<td>9%</td>
<td>17%**</td>
<td>23%**</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01

Source: Artiles & Rueda, in press

Placement in special education, especially when it is not warranted, can have devastating effects on students’ access to opportunities later in life. Evidence has existed for years documenting the massive rates of high school non-completion, underemployment, poverty, and adult marginalization of special education students after they leave high school (Guy, Hasazi, & Johnson, 1999). Placed in a special education track, it is unlikely for students to rejoin the mainstream. Robert Peckham, the presiding judge for the Diana case, summarized the evidence on the effectiveness of California’s special education program, calling it a “dead-end educational program” (Crawford v. Honig, 1988).

(6) Inequitable access to adequate facilities

While it has been notably difficult to establish a firm link between the quality and condition of school facilities and the educational outcomes for students—largely because the quality of school facilities is so highly correlated with wealth of the students and communities that schools serve—there is considerable consensus that it is difficult to both teach and learn in grossly inadequate facilities (Ortiz, 2002). Equally important, as we have already established, the conditions of schools are also related to teacher turnover. Teachers do not want to teach in dirty, dangerous, and uncomfortable conditions, and so they leave when they can. And, given that it is exceptionally difficult, if not impossible, to effect school reform without a stable base of teachers, school facilities certainly play an important, albeit indirect, role in student achievement.

Teachers of English learners are more apt than teachers of English speakers to respond that they do not have facilities that are conducive to teaching and learning. In the Harris survey close to half of teachers in schools with higher percentages of English learners reported the physical facilities at their schools were only fair or poor, compared to 26 percent of teachers in schools with low percentages of English learners (Table 12). Teachers in schools with high percentages of English learners were 50 percent more likely
to report bathrooms that were not clean and open throughout the day and having seen evidence of cockroaches, rats, or mice.

Table 12. Condition of Facilities of California Schools by Percentage of English Learners in Teachers’ Schools, January 2002 (percent of teachers reporting condition)

<table>
<thead>
<tr>
<th>Condition</th>
<th>25% or less</th>
<th>Over 25%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>The adequacy of the physical facilities is ONLY FAIR OR POOR</td>
<td>26</td>
<td>43</td>
<td>32</td>
</tr>
<tr>
<td>Bathrooms ARE NOT clean and open for throughout day.</td>
<td>13</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>HAVE seen evidence of cockroaches, rats, or mice in past year.</td>
<td>24</td>
<td>34</td>
<td>28</td>
</tr>
</tbody>
</table>

Note: Results exclude respondents who did not answer question or answered “not sure.” Results are weighted. All column differences are statistically significant at .05 level or better. Source: Harris Survey of a Cross-Section of California School Teachers, January 2002 (N=1071).

ECLS data show the same picture with regard to facilities. More than a third of principals in schools with higher concentrations of English learners reported that their classrooms were never or often not adequate, compared to 8 percent of principals with low concentration of EL students (Table 13). (Note 32)

Table 13. Characteristics of California Elementary School Facilities by EL Concentration, Spring1999

<table>
<thead>
<tr>
<th>Condition</th>
<th>25% or less</th>
<th>More than 25%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classrooms never or often not adequate (Note 33)</td>
<td>8</td>
<td>35</td>
<td>19</td>
</tr>
</tbody>
</table>

Note: Results are weighted (S2SAQW0). Source: ECLS base year data for California public elementary schools (N=69).

Such conditions not only make it more difficult to teacher English learners, they also make it difficult to retain teachers since, as we showed earlier, a considerable body of research finds that teachers are more likely to leave schools with poor working conditions.

(7) Intense segregation into schools and classrooms that place them at particularly high risk for educational failure

Research on desegregation has established that minority students who are schooled in desegregated settings tend to have better occupational outcomes and overall life chances (Wells & Crain, 1994; Crain & Strauss, 1985). Sociologists often explain this phenomenon as the impact of social capital—access to important social networks—on student outcomes (see for example, Stanton-Salazar, 1997). Therefore, one reason to be concerned about
racial, ethnic, or linguistic isolation is the effect it has on limiting access to important social networks. However, a more immediate impact of linguistic isolation is the lack of appropriate English language models, which can result in both reduced opportunities to hear and interact with the language, and fewer opportunities to understand the ways in which the language is actually used in social and academic contexts (August & Hakuta, 1997). Both are important features in the development of high levels of linguistic skill.

We argue that the concentration of English learners in classrooms and schools in California compromises their opportunity to receive an education that is comparable in quality and scope to that of their non-EL peers because: (1) the lack of peer English language models limits the development of English; (2) the lack of models of children who are achieving at high or even moderate levels inhibits academic achievement, (3) the inequitable environmental conditions and resources of segregated classrooms and schools, and (4) the lack of highly qualified, experienced, teachers in these particular classrooms depress learning.

The first source of inequity stems directly from the segregation itself --English learners are more likely to attend classes and schools surrounded by other students who are not proficient in English. This hurts English learners' ability to become proficient in English because research has shown that the composition (relative numbers of English-language learners and fluent English speakers) and structure (opportunities for interaction) of the classroom can inhibit meaningful second language acquisition (Hornberger, 1990; Wong Fillmore, 1991). Moreover, a recent California study found that the higher concentrations of English learners in schools, the lower rates of reading development in first grade (Rumberger & Arellano, 2003).

The educational achievement of English learners is also hurt by their segregation because they are less likely than other students to be surrounded by peers who excel in school. As shown in Table 3, classrooms with high concentrations of English learners also have a higher number of students who are below grade level in reading and math than classrooms with low concentrations of English learners. Research has shown that the academic achievement of peers influences students' own academic achievement, in part, because students learn from each other (Epstein & Karweit, 1983; Hanushek, Kain, Markman, & Rivkin, 2001; Hoxby, 2001; Mounts & Steinberg, 1995; Hurd, in press). Thus, the concentration of English learners in California’s schools and classrooms not only makes it more difficult for them to learn English, it also makes it more difficult for them to achieve academically.

Lack of integration with native English speakers, both at the school-site and the classroom level can therefore prove problematic for ELs as well. English learners are highly segregated among California’s schools, and thus isolated from the language models and social capital necessary to ensure success in school (Harklau, 1994; Olsen, 1997). While most schools have some English learners, the vast majority of these students attend a relatively small percentage of public schools. Thus, English learners are much more likely than their English-only peers to attend schools with large concentrations of EL students.

As shown in Table 14, while twenty-five (25) percent of all students in California attend elementary schools in which a majority of the students are English learners, more than half of all English learners (55%) are enrolled in such schools. At the middle school level, only 8 percent of the schools have more than 50 percent of the English learners. Very few high schools have such high concentrations of English learners. Nonetheless, almost half of all
EL students attend high schools with more than 25 percent English learners. Thus, the distribution of English learners across schools is uneven and these students tend to be clustered in a relatively small percentage of schools.

Table 14. Schools, Students, and English Learners by Concentration of English Learners and School Level, 1999-2000 (Percent Distribution)

<table>
<thead>
<tr>
<th>Percent English Learners</th>
<th>Elementary</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Schools</td>
<td>Students</td>
<td>ELs</td>
</tr>
<tr>
<td>0</td>
<td>6</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1-25</td>
<td>51</td>
<td>48</td>
<td>15</td>
</tr>
<tr>
<td>26-50</td>
<td>24</td>
<td>26</td>
<td>30</td>
</tr>
<tr>
<td>51-100</td>
<td>19</td>
<td>25</td>
<td>55</td>
</tr>
<tr>
<td>Total percent</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Total number</td>
<td>5,306</td>
<td>3,124,107</td>
<td>979,854</td>
</tr>
</tbody>
</table>

Note: ELs = English learners.
Source: CBEDS and Language Census.

English learners are even more concentrated at the classroom level. In 2000, researchers from the California Class Size Reduction Study surveyed a representative sample of California teachers who taught grades 1-4 (Stecher & Bohrnstedt, 2002). They found that more than three quarters of all teachers had at least some English learners in their classrooms, and almost one-quarter taught in classrooms with more than 50 percent English learners (Table 15).

Table 15. Teachers, Students, and English Learners in Grades 1-4 by Classroom Concentration of English Learners, 2000 (Percent Distribution)

<table>
<thead>
<tr>
<th>Percent English Learners in the classroom</th>
<th>Teachers</th>
<th>Students</th>
<th>English Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>24</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td>1-25</td>
<td>38</td>
<td>39</td>
<td>17</td>
</tr>
<tr>
<td>26-50</td>
<td>16</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>51-100</td>
<td>22</td>
<td>22</td>
<td>63</td>
</tr>
<tr>
<td>Total percent</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: Results are weighted.
Even more striking, almost two-thirds of English learners enrolled in grades 1-4 attended classrooms in which more than 50 percent of their fellow students were English learners. Thus, while classrooms in grades 1-4 enrolled an average of 6 English learners (see Table 16) in 2000, the distribution of these students across classes was highly uneven.

Table 16. Average number of Students with Selected Characteristics in Classrooms Grades 1-4 by Classroom Concentration of English Learners, 1999-2000

<table>
<thead>
<tr>
<th>Percent English Learners in the classroom</th>
<th>Total students</th>
<th>Black and Hispanic</th>
<th>English Learners</th>
<th>Free or reduced lunch</th>
<th>Below grade level in reading</th>
<th>Below grade level in math</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>1-25</td>
<td>22</td>
<td>9</td>
<td>3</td>
<td>9</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>26-50</td>
<td>21</td>
<td>12</td>
<td>8</td>
<td>14</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>51-100</td>
<td>21</td>
<td>17</td>
<td>17</td>
<td>19</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>10</td>
<td>6</td>
<td>11</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: Results are weighted.

If students were clustered into these classrooms in order to provide core academic instruction in the primary language and mainstreamed for part of the day to receive instruction in English (preferably in highly interactive and non-high stakes settings like arts, music, physical education), the segregation of EL students would not only be defensible, but would constitute a valid educational treatment. However, in the wake of Proposition 227, most English learners are simply segregated into classrooms populated disproportionately by other English learners where the opportunity to learn both English and academic content is compromised by the lack of appropriate models and instruction targeted to their linguistic strengths.

What Can and Should be Done to Address these Inequities?

To some extent all problems of inequity become problems of resources. Disadvantaged students need more resources to help them close the achievement gap vis-à-vis their English only peers. Because redistributing resources is never politically popular, the only solution is almost always to find new resources for those who are shortchanged. While this is easily suggested, it is more difficult to implement. The states, and California in particular, are facing historic budget shortfalls. Realistically, there will be no new state funds for public schools until later in this decade. In the meantime, what can and should be done to address these inequities. We argue that there are things that can be done in every category of inequity.

Increasing access to qualified teachers

The problem of under-qualified teachers is much larger than simply the failure to recruit and train sufficient number of teachers. Close to half of all new teachers recruited into urban districts such as those that disproportionately serve English learners leave the
teaching profession within five years (NEA, 2003; Darling-Hammond, 2002). And in schools with high teacher turnover, there is typically high administrator turnover as well. Stability in both leadership and teaching staff is an enormous problem for urban schools. And yet, if there is one area in which district administrators and policymakers can have a significant impact it is this. Administrators must do everything possible to retain well-functioning principals at the same schools, and policymakers must design regulations that help to ensure consistency and stability. We know that teaching and learning conditions are ultimately more important to school personnel than modest salary increases. Every teacher and principal deserves to know they will be backed up by district administration as long as they are doing a good job. Policymakers must find incentives to keep good teachers and principals in their schools, and remove the incentives for them to move into less challenging schools. Of course, this means that administrators and policymakers must tackle, head on, the conditions that drive good people out of these schools—poor facilities, safety concerns, lack of professional support. Administrators must help teachers to create supportive communities, and break down the isolation that teachers often feel, especially in challenging schools. Some schools do this by reorganizing their schedules to allow teachers time, during the school day, to meet, plan, and discuss effective strategies and interventions for students who are struggling in school.

Providing adequate materials and good schooling conditions

Parents are a resource that is too often overlooked for English learners. Even parents without high levels of education can make significant contributions to their children’s schools. We know many of the reasons that parents of English learners do not participate actively in their children’s schools or schooling, but because parent involvement is known to be an important predictor of students' success in school, it is critically important that the schools find ways to involve them. (Delgado-Gaitán, 1990; Henderson, 1997; Okagaki, Frensch, & Gordon, 1995; Steinberg, Brown, Cider, Kaczmarek, & Lazzaro, 1988; Steinberg, Dornbusch, & Brown, 1992; Steinberg, Brown, & Dornbusch, 1996; Useem, 1992). One important way is to encourage parents to read to their children. Schools must provide books and materials to facilitate this. Most schools that serve large numbers of English learners have—or had—primary language books that can be sent home with children. We know that after the passage of Proposition 227 some schools got rid of these books or put them away (Gándara & Maxwell-Jolly, 2000) but these books should be provided for family reading nights at the school, and be sent home with students.

Beyond this, it is simply not fair to teachers or students to be asked to teach and learn in an unsafe, unpleasant environment. Administrators must come forward and demand better from their school district and from their legislators. In economically difficult times policymakers need to make difficult decisions about priorities—what priority does a safe, clean, hospitable school have, especially when we know that this will have an impact on retaining experienced teachers?

Providing equitable and meaningful assessment for English learners

There is no research support for using English language tests to assess students who do not speak English. In acknowledgement of this fact, the NCLB Act requires assessment in the native language where possible, during the initial years that an EL student in our schools. Policymakers should be held accountable to develop an assessment system that is responsive to the needs of English learners, and in the meantime, teachers—especially
those who speak the language of the students—should be supported in developing good informal assessments. District administrators should never pass up an opportunity to let legislators know that the current system of assessment of English learners is not meeting anyone’s needs. State administrators should seek ways to use federal funds to help develop more appropriate instruments for these students.

**Appropriate and rigorous coursework and access to counselors**

In part because we draw conclusions about many English learners based on tests that are not capable of accurately portraying their skills, many teachers and administrators underestimate the ability and potential of these students. It is critically important that we hold the same high expectations for English learners that we do for other bright and talented students. We know that there is great variation in the skills that English learners bring to the classroom, and this can create enormous challenges for teachers. But, it is important to capitalize on the strengths that these students have, and many excel in particular areas of the curriculum even though their English skills are weak. Administrators, teachers, and counselors must advocate for their English learners and press for them to be included in all that the schools have to offer. In secondary schools, we must find ways to offer classes that are meaningful and lead to postsecondary options. Even in California, with its heavy restrictions on the use of primary language instruction, at the secondary level, many courses can be provided in the native language of the students, and these courses can meet the same high standard of rigor of any college preparatory class. Moreover, a premium should also be placed on recruiting and hiring counselors who can communicate with English learners and their parents.

**Providing more instructional time**

Administrators must work with teachers to organize their teaching in ways that reduces the “dead time” that English learners spend waiting for specific instruction and find ways to avoid removing students from content instruction in order to receive English language instruction. Administrators also must avoid ever placing English learners in shortened day or year schedules. These students need more exposure to the curriculum and to models of English, not less.

Teachers and administrators must provide a welcome environment for the parents of English learners. Having parents come in to read to students—in a language they can communicate in—is NOT illegal, and does not violate any aspect of law restricting the use of primary language, as this is not considered instruction. But, it DOES make both students and parents feel more at home in the school and it does teach love of learning and appreciation for the power of literacy and the printed word—prerequisites for becoming good readers.

Meanwhile, policymakers must face the reality that unless English learners are provided more time for learning than other students, they will never be able to close the achievement gap. While politically difficult, it is in the interest of everyone that these students perform at higher levels, and this can only be accomplished if policies are created that allow them to receive more time dedicated to high quality instruction. In California, more than 500 million dollars are invested annually in after school programs. These programs could be linked much more directly to school instruction and serve as a source of enriched language instruction for English learners.
At the state and national policy level, we need a new initiative on behalf of secondary English learners. Little attention is paid to the needs of students at this level, and their plight is actually far more daunting than that of younger students with more time to adapt.

**Increasing professional development for teachers of English learners**

Districts provide much of the professional development that teachers receive. School districts must place a higher priority on developing the skills of teachers to work with English learners, and policy makers must press for greater focus on the specific needs of English learners in state supported professional development programs. While “infusing” the needs of English learners into all types of professional development activities is a reasonable ideal, the reality is that it often does not occur at all when it is not the central focus of the instruction. Moreover, the specific linguistic needs of English learners are seldom covered in depth when the professional development is designed principally for English speakers. All professional development activities should include a significant, separate module for teaching English learners.

**Addressing the effects of segregation of EL students**

Segregation is an enduring—and recurring—problem in American society that has not responded completely to any single intervention (Orfield & Eaton, 1996). And, in some areas of California there simply is not enough diversity of students within a reasonable distance to mix them more heterogeneously. But, we must address this as a serious problem that requires specific interventions. Schools can provide language rich environments in which students are exposed to good models of English throughout the day and throughout the curriculum. Many forms of media—newspapers, film and video, audiotapes and radio—drama productions, after school language-based programs that involve local high school and college students can all provide opportunities for students to both hear and speak English.

Because segregation also has implications for what students know about navigating the schooling system, teachers should also be encouraged to hold regular conversations with English learners about “how the system works.” What are the things that middle class English speakers know about schooling that English learners do not know? Teachers can help students to acquire more “cultural capital” through systematic, directed, instruction. At the high school level, this can take the form of demonstrating to students the importance of taking higher level math courses, and the social and economic advantages of going to college. We have been surprised by the extent to which many low income and English learner students do not know, for example, the relationship between taking higher math and increasing postsecondary opportunities (Gándara, Gutiérrez, & O’Hara, 2001).

**Conclusions**

Most English learners are immigrants or the children of immigrants. There is mounting evidence that immigrant students, and the children of immigrants are more academically ambitious than native-born students (see, for example, Suárez-Orozco & Suárez-Orozco, 1996; Rumbaut, 1996). This suggests that there is a critical window of opportunity in which to affect these children’s academic futures. If we seize the opportunity and apply the resources while they are in the public schools, we may be able to set these young people on a solid upward trajectory. On the other hand, if we allow this opportunity slip by, the
evidence suggests that the challenge will be greater in succeeding generations. The moment is a particularly difficult one, however, for the states, and for California in particular. The unfunded mandates of No Child Left Behind (NCLB) legislation, passed at the beginning of the George W. Bush administration, have placed obligations on the states that many contend they cannot meet. Some people argue that the requirement to staff every classroom in California with a “highly qualified” teacher is beyond the capacity of a state in which nearly one of every five teachers is currently under qualified and there are insufficient resources to meet the needs of a burgeoning student population. Moreover, with the state in virtual bankruptcy, (Note 34) it is unclear where the resources can be found for the increasing numbers of underperforming schools that NCLB requires be aided. In this climate, the special needs of English learners, albeit one-fourth of the school population, are easily overlooked. How is the state to provide a highly qualified teacher for every English learner when it lacks the resources to provide a teacher with any qualifications in many of the state’s classrooms? And, how is it to ensure appropriate instructional materials and facilities for English learners when it lacks the funds to make capital improvements and repairs on existing facilities that fail to meet basic building code requirements?

California finds itself in the position of reaping the legacy of its own failure to act when economic times were good. Even while the state funded billions of dollars in class size reduction, strengthened the professional development that teachers received across the state, and provided large cash incentives for raised test scores, it failed to make a single major improvement in the instruction of its English learners. While it developed a comprehensive plan for charting the progress of its students with multiple tests and assessments, it did not invest in the development of a single valid measure of academic achievement for its English learners. And, as standards for teacher credentials were raised, the standards to teach English learners were being lowered. Now, as they form a larger and larger portion of the school population, and threaten any real academic gains for the state as a whole, the success of California’s reform efforts depends on its ability to raise the achievement of its EL student. Yet there is little evidence that the leadership of the state either understands this urgency or is prepared to address it. English learners in California, and in the nation, represent a potentially rich social and economic resource—if the state invests in them. Without such investment, the future of California education looks grim.

Notes

1. National language statistics can be found at http://www.ncela.gwu.edu/states/index.htm
2. California population totals can be found at http://data1.cde.ca.gov/dataquest
3. In 1999, the state augmented the SAT9 with a test more closely aligned with the state’s academic content standards. The first tests, in English/Language arts and mathematics, were first administered 1999. History/social science and science were added in 2001. In 2003, the SAT9 was replaced with another norm-referenced test, the California Achievement Test (see http://star.cde.ca.gov/).
4. The State Department of Education provides aggregate test scores on it’s website for each year, but the data are only disaggregated by language groups for the years 1999 through 2001.
5. Because of migration and mobility, the cohorts are not necessarily composed of the same students each year, which illustrates the need for a longitudinal study of students (see Kaufman, 2002).

6. The CAHSEE covers ELA standards “through Grade 10” and Math standards for “grades 6 and 7 and Algebra I”
http://www.cde.ca.gov/statetests/cahsee/background/info.html

7. Based on analysis of Early Childhood Longitudinal Study (ECLS) Kindergarten Cohort, California sub-sample (N=2826).

8. LAUSD divides its Structured English Immersion classes into two types: Model A, which is English only and Model B, which allows some primary language support. Data are more difficult to interpret for Model A because cell sizes are smaller and the authors report a lack of confidence in these small numbers.

9. These include the bilingual certificate of competence (BCC or the Bilingual Cross-cultural Specialist Credential, equivalent to the BCLAD) and the Language development specialist certificate (LDS, equivalent to the CLAD).

10. See above.

11. The survey did not identify teachers who had authorizations acquired through SB1969 or SB395.

12. The Chancellor’s Office of the California State University reports that 70% of its credential graduates completed either a CLAD or BCLAD credential.

13. This survey, conducted in 2002 by the Lou Harris Polling group, included 1,071 California teachers, both randomly and representatively sampled to approximate a profile of all the state’s teachers; 27% were male; 84% were White.

14. Portions of this section of the article were written by Kenji Hakuta

15. Until 2003, the SAT was part of the state accountability system (STAR), which also includes standards-based test items. In 2003 students were given a new, norm-reference test, the CAT-9 (ETS), in addition to the standards- based items.

http://www.cde.ca.gov/statetests/star/qanda/smar212001.html


19. Standard 11.22 of the AERA/APA/NCME Standards for Educational and Psychological Testing, for example, note that “When circumstances require that a test be administered in the same language to all examinees in a linguistically diverse population, the test user should investigate the validity of the score interpretations for test takers believed to have limited proficiency in the language of the test.”


21. The United States Department of Education, Office of Educational Research and Improvement has recently commissioned ARC Associates to conduct a study using San Francisco Unified School District data to help answer this question. We would hope that the findings from this study will inform California testing policy.


23. San Diego Education Association, CTA Reports, November, 1999

24. In a review of test score data for 16 school districts in the aftermath of the passage of Proposition 227, Gándara and Maxwell-Jolly (2000) found few districts
actually adhering to this policy. However, the state has not pressured schools to conform to policy and provides no sanctions for failing to do so.

- 27. Results from the May-October 2000 testing window were reported to school districts as late as April of 2001.
- 28. CAHSEE aggregate test results are available on the CDE Dataquest page, under results by program. http://data1.cde.ca.gov/dataquest/ExitProg1.asp?cYear=2002-03&cChoice=ExitProg1&cAdmin=C&tDate=000000&Pageno=1
- 31. School districts manage to stay within the law by adding a few minutes at the end of each day to total the same number of hours as students who are on 180 day schedules.
- 32. It is interesting to note that 19 percent of all principals in California reported that their classrooms were never or often not adequate, compared to 9 percent of principals in the rest of the United States.
- 33. This question did not require the respondent to specify in what way the classroom was inadequate.
- 34. At this writing, California was without a budget because no solution could be agreed upon in the legislature as to how to close a gaping $38 billion gap between expenses and revenues, and the state’s credit rating was the worst in the country. It was inconceivable that a solution could be found that did not implicate drastic cuts to social and educational services.
References


California Education Code Chapter, Sections 60850-60859. High School Exit Examination.


*Crawford v. Honig*, No. C-89-0014 (N.D.Cal.).RFP


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