

## DEFINING AN ADEQUATE EDUCATION FOR ENGLISH LEARNERS

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### **Abstract**

This article explores the components of an “adequate” education for linguistic minority students in California and attempts to distinguish these from the components of an adequate education for low-income students who are native English speakers. About 1.6 million students were classified as English learners (ELs) in California in 2006. We argue that in order to determine the costs of educating these students, it is necessary to specify the goals of instruction. Four possible goals are: (1) reclassification to fluent English proficient (FEP) only; (2) reclassification to FEP and maintenance of academic proficiency; (3) reclassification with biliteracy; and (4) reclassification and closing of achievement gaps. Each goal implies different resource needs. We conclude that most additional resources needed by EL students are similar to those for other low-income children; some specific areas of need that differ are English language development (ELD) materials and additional skills for teachers. Biliteracy can be achieved with modest additional investment.

## 1. INTRODUCTION

In order to meet the same challenging standards and to have the opportunity to achieve the same educational outcomes, some students need more support and resources than others. Students who come from households where a language other than English is spoken are in one such category. Although some arrive at school already proficient in English, most linguistic minority (LM) students are not yet proficient in English when they start school. These students, referred to as English learners (EL), require additional resources and support in order to acquire English proficiency and to be successful in school.<sup>1</sup> School districts differ substantially in the criteria they use to redesignate EL students to the status of fluent English proficient (FEP), so many students who are considered fluent English speakers in one district are considered EL in another (Parrish et al. 2006). Moreover, many students who ostensibly speak English sufficiently well to converse at a superficial level lack the academic English that is so critical for school success. Thus English fluency is best conceptualized as a continuum, rather than a dichotomy in which a student either is or is not fluent in English. Seen in this way, linguistic minority students are arrayed at all points on this continuum and need correspondingly different kinds of services and academic support. As such, we do not always draw clear distinctions between LM and EL students. We argue that the literature has overly simplified these categories and thus has failed to acknowledge the ongoing needs of students who come from linguistically different circumstances. We also note that students from English dialect communities may be considered linguistic minorities for pedagogical and policy purposes, although we are not allotted sufficient space here to pursue this issue.

This article explores what it might mean to provide an “adequate” education for linguistic minority students in California and attempts to distinguish this from the components of an adequate education for low-income students who are native English speakers. We begin with an overview of the LM population in California, the conditions in which these students are currently being educated, and indicators of the academic performance of ELs (because school performance data are not consistently collected for LM students). We then argue that the resources necessary to provide an adequate education for LM students depend on the goals of instruction, and we present four possible goals. Next we describe the methods we used to examine the resource needs of LM students and briefly describe how these methods have been used in the

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1. Terms used to label students who are not fluent English speakers vary widely from region to region. “Limited English proficient” (LEP) remains in many legislative documents, though it is no longer widely used by practitioners. “English language learner” has replaced LEP in many places, but for ease of expression the term “English learner” has gained popularity, especially in the West, and we choose to use the term and its acronym, “EL,” for reasons of simplicity.

literature. We present the case study data we collected, combined with what we have concluded from the literature, and summarize the likely costable components of an adequate education for each of the four possible educational goals we propose. We end with a recommendation that policy makers seriously consider the most ambitious goal, given that the additional costs are minimal and the returns are potentially great.

Although most low-income students need some additional educational support to compensate for the limited socioeconomic and educational resources in their homes and communities, the needs of linguistic minority students differ to some extent from the needs of other disadvantaged populations; they also need language support. Moreover, the needs of these students differ from each other depending on their linguistic, social, and academic backgrounds and the age at which they enter the U.S. school system. California, the state with the highest percentage of EL students in its K–12 population, faces particular challenges in meeting the needs of these students.

## **2. CALIFORNIA'S LINGUISTIC MINORITY POPULATION**

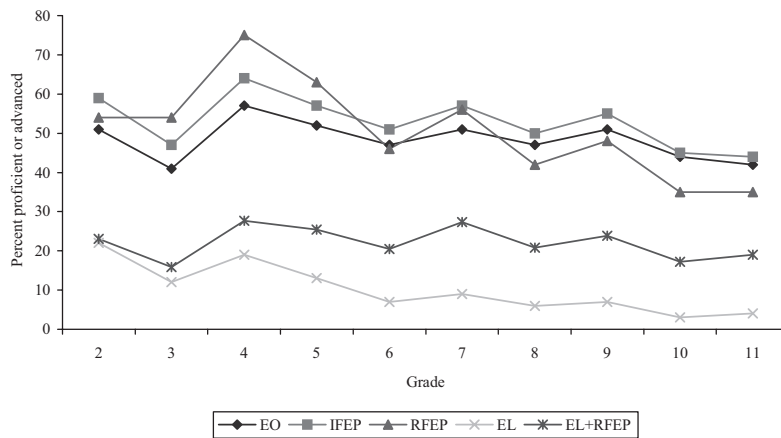
According to data from the U.S. census, there were 3 million children aged 5–17 living in California in 2005 who spoke a language other than English, representing 44 percent of the school-age population (Rumberger 2006). This is a much larger percentage than the rest of the country, where linguistic minority children represent 16 percent of the population. Overall, 29 percent of all school-age linguistic minority children in the United States reside in California; 85 percent of all students categorized as English learners speak Spanish.

Over the last twenty-five years, the linguistic minority population has exploded relative to the English-only population, both in California and in the rest of the United States. In California, the linguistic minority population increased 187 percent, while the English-only population increased by only 8 percent. Elsewhere in the United States, the linguistic minority population increased by 113 percent, while the English-only population actually declined by 2.2 percent. Demographers project that these percentages will continue to grow.

Using the definition of eligibility for free or reduced lunch, which is the primary way government entities categorize low income within school settings, about 85 percent of EL students in California are economically disadvantaged (California LAO 2007, p. E-123). As such, these students usually face a double disadvantage—language difference and poverty.

### **School Performance**

Linguistic minority children, particularly those who are not yet proficient in English, lag far behind children from English-only backgrounds. For example,



Source: California Department of Education 2007

**Figure 1.** Performance on California Standards Test in English Language Arts by Language, 2005

figure 1 shows the percentage of students scoring at the proficient level on the California Standards Test in English Language Arts in 2005, by language background.

Fifty-one percent of English-only (EO) students scored at the proficient level in grade 2, declining to 42 percent by grade 11, while a surprisingly high 22 percent of second-grade ELs actually scored proficient in English language arts, but barely any are proficient by grade 11.<sup>2</sup> Language minority students who entered school already proficient in English (initially fluent English proficient, or IFEP) scored consistently higher than EO students at all grade levels. However, students who were reclassified as fluent English proficient (R-FEP) initially performed higher than EO students in the lower grades, but by grade 8 their scores decline below those of EO students. Because the number of English learners declines over the grades as more and more students are reclassified to FEP, and because we argue that EL and R-FEP are not actually dichotomous categories, it is appropriate to combine current ELs and former ELs for purposes of tracking academic performance (identified in the figure as EL + RFEP). Twenty-three percent of this combined population in grade 2 scored at the proficient level, with performance peaking in grade 4 but then declining to 19 percent in grade 11. Over the grade span, the achievement gap between English-only students and current/former EL students remains essentially unchanged.

2. Because the definition of “English learner” includes an inability to do grade-level work in English, this raises questions about the demands of the test and/or the accuracy of the categorization of EL students at the second grade. The assumption must be that most of these students are at the point of testing out of the EL category.

### Conditions for Learning

Linguistic minority students also face poorer conditions for learning in school. Drawing on data from a variety of sources (Gándara et al. 2003; Rumberger and Gándara 2004), we identified seven inequitable conditions that affect these students' opportunities to learn in California and that are linked to resources:<sup>3</sup>

1. *Inequitable access to appropriately trained teachers.* English learners are more likely than any other group of students to be taught by a teacher who lacks appropriate teaching credentials. For example, Rumberger (2003) found that while 14 percent of teachers statewide were not fully credentialed, 25 percent of teachers of English learners lacked a teaching credential. Although the percent of teachers lacking credentials has continued to decline each year (in part due to a redefinition of the term “credentialed”), ELs continue to be disproportionately taught by underqualified teachers. In 2005, less than half (48 percent) of teachers of EL students had an appropriate EL authorization to teach them (Esch et al. 2005).
2. *Inadequate professional development opportunities to help teachers address their instructional needs.* In a recent survey of 5,300 teachers of English learners in California, Gándara, Maxwell-Jolly, and Driscoll (2005) found that more than half of teachers with 26–50 percent of their students designated EL had no more than one professional development session devoted to the instruction of EL students over a period of five years. Moreover, about one-third of respondents complained that sessions were of low quality and limited utility.
3. *Inequitable access to appropriate assessment to measure their achievement, gauge their learning needs, and hold the system accountable for their progress.* Because the state's accountability system consists of standards-based tests developed for English speakers and makes no accommodation for the fact that EL students are, by definition, not proficient in English, these tests are neither valid nor reliable indicators of what these students know and can do (AERA/APA/NCME 1999).
4. *Inadequate instructional time to accomplish learning goals.* Across the state, English learners are provided no additional classroom instructional time even though they have additional learning tasks—acquiring English as well as learning a new culture and its demands. One way that schools can effectively provide more instructional time is by providing additional instructors within the same time—that is, more one-on-one instruction within the confines of the same number of hours. However, classrooms in

3. Although this analysis focused primarily on the English learners, the conditions would generally apply to all linguistic minority students.

California with large numbers of EL students have fewer adult assistants to help provide individual attention for students—an average of seven hours of assistance weekly for classrooms with more than 50 percent EL students versus eleven hours for those with no ELs (Gándara et al. 2003).

5. *Inequitable access to instructional materials and curriculum.* A 2002 survey of 829 California teachers found that among classrooms with over 30 percent EL students, 29 percent of teachers reported not having adequate materials in English for their students, while only 19 percent of teachers with fewer than 30 percent EL students reported this same shortage (cited in Gándara et al. 2003).
6. *Inequitable access to adequate facilities.* In the same survey of California teachers cited above, 43 percent of teachers in schools with more than one-fourth EL students reported their physical facilities were only fair or poor. Among teachers with less than one-fourth EL students in their school, only 26 percent reported similarly dismal conditions on their campus.
7. *Intense segregation into schools and classrooms that place them at particularly high risk for educational failure.* In 2005, more than half of California's elementary English learners attended schools where they comprised more than 50 percent of the student body, which limited their exposure to native English speakers who serve as language models (Rumberger, Gándara, and Merino 2006).

These conditions contribute to the lack of progress in narrowing the sizeable achievement gap between English-only and linguistic minority students.

### 3. GOALS OF INSTRUCTION

In a recent article critiquing the methodologies used in “costing out” studies,<sup>4</sup> Rebell (2007) notes that one of the weaknesses of such studies is their failure to identify the premises behind their outcome standards. In order to address this legitimate concern, we outline four possible standards for an adequate education of linguistic minorities, which would have implications for different types and levels of expenditures, as well as quite different outcomes for students: (1) reclassification to FEP only; (2) reclassification and maintenance of academic proficiency; (3) reclassification with biliteracy; and (4) reclassification and closing of achievement gaps.

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4. Rebell here refers to studies that have used a variety of methods to determine the actual costs of providing some agreed upon level of education for public school students. These studies are usually motivated by an attempt to define an “adequate” or an “equal” education for educationally disadvantaged students.

1. *Reclassification to FEP only.* The first standard is a basic, minimal standard, much like the one that is tacitly in place today (and that probably contributes to the exceptionally low performance of EL students in the schools). The goals for this standard are to pass an English proficiency test and an English language arts standards test *at some minimal level and at one point in time*, in order to be reclassified as fluent English proficient.<sup>5</sup> This standard does not speak to the students' overall academic proficiency, nor does it consider the skills that students need to maintain the level of academic proficiency attained at the point of reclassification. Once a student is classified as FEP, all additional supportive services typically end. This standard focuses almost exclusively on attainment of sufficient English to be mainstreamed into the regular curriculum. Although it represents current practice, it is a lower standard for adequacy than that set for English speakers who are expected to meet standards at a level of "proficient" at *every* subsequent grade level. Therefore the state might choose to define an adequate education for EL students at a somewhat higher level.
2. *Reclassification and maintenance of academic proficiency.* The second-level standard would provide for students to become reclassified as FEP *and* sustain a level of proficiency in English language arts and other tested areas of the curriculum (e.g., mathematics and science). This would align more closely with the definition of an adequate education for all students, certainly as specified by the No Child Left Behind (NCLB) Act. Given that ELs, by definition, come to school with greater needs than their peers who already have a command of English, the implications for this definition are that ongoing resources would be needed for schools to bring linguistic minority students to this level and to maintain them there. This is akin to what happens for low-income students—resources are continuous no matter what level of achievement they attain.
3. *Reclassification, maintenance of academic proficiency, and biliteracy.* The third standard is achievement of reclassification to English proficiency, proficiency in academic subjects, and biliteracy. This goal also incorporates an inherent compensating advantage for EL students. The one area in which these students have a decided advantage over their English speaking, native-born peers is that they have the immediate potential of becoming fully bilingual and biliterate, with all of the attendant economic and occupational advantages that may accrue to those competencies (Saiz and Zoido 2005). This third definition of an adequate education for linguistic minority students could include providing a socioeconomically compensating

5. The California English Language Development Test is currently used to test English proficiency.

skill (on an optional basis) for LM students—biliteracy—in addition to meeting the basic educational adequacy definition for all students. The goal of attaining biliteracy would necessarily have to be optional, or voluntary, on the part of students and families (and could be extended to all students in California), as it would entail not only additional resources (and benefits) on the part of the state but also additional effort on the part of the students.

4. *Reclassification, maintenance of academic proficiency, and closing of achievement gaps.* This fourth goal implies a focus on achievement across the performance continuum, raising the achievement of high performers as well as lower performers so that the end result is something like parity with native English speaking peers. We suggest that this standard deserves particular consideration because many school reform efforts purport to be dedicated to this goal, without specifying exactly how this would happen and the additional resources that would be required beyond those to reach the previous goals. The research on second language acquisition suggests that closing achievement gaps is most likely to occur in the context of a biliteracy curriculum (August and Shanahan 2006; Genesee et al. 2006; Slavin and Cheung 2005). However, there are many who argue that it is impossible to reach such a standard given U.S. social policy and the paradigm of public schooling (see, for example, Rothstein 2004).

### **Language of Instruction**

With the exception of the third standard—biliteracy—we have been agnostic about the linguistic strategies for achieving these goals. However, the language(s) used for instruction may, in fact, imply a different level of resources because (1) a different configuration of personnel may be required if a student is educated using the primary language, and (2) it may take more or less time to achieve proficiency in academic subjects and to sustain that learning, depending on the linguistic strategy used. So for each of these goals, we posit that a separate calculation should be considered for English-only and bilingual strategies. It is not evident, however, that the cost differentials would always vary in the same ways. For example, the existing research on the costs of teachers for EL students has found that, all things being equal, using bilingual teachers is a more cost-effective strategy than using monolingual teachers and then having to supplement the classroom instruction by bringing in aides and other support personnel (Parrish 1994; Carpenter-Huffman and Samulon 1981). On the other hand, if no supplemental teaching staff are used in the English-only classroom, it may require that teachers have smaller classes in order to achieve the same results. In California today, most EL students who have not yet been mainstreamed receive some kind of supplemental instruction if they

are not in a bilingual program with a bilingual teacher (California Department of Education 2007), although this varies in unknown ways.

### **California's Language Policy Environment and Its Impact on Classroom Instruction**

In spite of California laws passed in the 1970s and 1980s that expressly mandated bilingual education for most English learners, the state has never provided primary language instruction for the majority of its EL students. Prior to the 1998 passage of Proposition 227—the ballot initiative that aimed to dismantle bilingual education in the state—only 29 percent of eligible students were enrolled in a bilingual program (California Department of Education 2007). The reasons for the relatively low penetration of bilingual education are many, but most fundamentally the state lacked sufficient numbers of appropriately credentialed teachers to adequately staff bilingual classrooms. Parents, too, could opt their children out of such classes, and the ongoing political controversy over the efficacy of bilingual education, coupled with a natural immigrant desire to learn English as quickly as possible, also dampened the demand for bilingual instruction in some communities. Thus, in spite of the fact that about 40 percent of school-age students in 1998 were linguistic minorities and had been exposed to another language in their own homes (Rumberger 2006), policies to stimulate the production of bilingual teachers in the state were never seriously pursued. Today, only a little more than 5 percent of students receive academic instruction in their primary language, and many bilingual teachers have either dispersed to different positions or left the field. Hence books and materials that supported primary language instruction have been packed away or disposed of. California currently has a limited infrastructure for providing primary language instruction.

### **California's Current Expenditures for EL Students**

We have demonstrated that California's linguistic minority students both achieve at very low levels compared with their English-only peers and that they receive a comparatively poorer education than these same peers. Thus current state expenditures for these students would appear to be inadequate, or at least organized and utilized inadequately to meet the learning needs of LM or EL pupils. It is nonetheless useful to know the current baseline expenditures. The primary source of funds for EL educational support is the Economic Impact Aid categorical program, which provides a little more than \$1 billion in a block grant to school districts, allowing them considerable discretion in use for students (California LAO 2007, p. E-132). Smaller funding sources for professional development for teachers of ELs, testing and assessment, and a tutoring program add an additional 200 million state dollars. In

sum, although the state of California does not use a pupil weighting formula to determine expenditures for EL students, it spends about 13 percent more for these students. Supplemental support for English learners varies widely in other states—only twenty-five states provide any supplemental funding for English learners (*Education Week* 2005, p. 21), with the amount ranging from 6 percent in Arizona to 120 percent in Maryland (Duncombe and Yinger 2005, table 1).<sup>6</sup> In addition, California provides 11–26 percent more funding for poor students. Twenty-three states provide supplemental funding for poor students (*Education Week* 2005, p. 21), with the amount ranging from 5 percent in Mississippi to 100 percent in Maryland (Duncombe and Yinger 2005, table 1).

#### 4. STUDY METHODOLOGY

This study was conducted in two parts. First we undertook a systematic review of the literature on existing cost studies that have examined the supplemental costs for educating ELs and other disadvantaged students. Second, we collected new data through interviews with administrators and teachers in a sample of “beating the odds” schools—two elementary, one middle, and two high schools—that had been selected on the basis of exceptionally high performance of their EL students. We then synthesized the findings to develop a model of resource needs for linguistic minority students.

#### 5. FINDINGS

##### What Did We Learn from EL Cost Studies?

Scholars have used a number of methods to estimate the additional costs for educating poor, English learner, and disabled students, with each method having strengths and weaknesses (for a review, see Baker 2006; Baker, Taylor, and Vedlitz 2004; Duncombe, Lukemeyer, and Yinger 2004). The results of these analyses vary widely, not only among the different states in which the studies have been conducted, but also by the particular method used (See *Education Week* 2005, pp. 36–38). Baker, Taylor, and Vedlitz (2004) identified seventeen studies that estimated the additional costs for educating EL students and twenty studies that estimated the additional costs for educating poor students. A recent summary of twelve studies based on the most commonly used method<sup>7</sup> found that the mean supplemental cost for educating ELs was 74 percent and the mean supplemental cost for educating poor students was 52 percent (Imazeki 2007, table 6). Three recent studies were conducted in

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6. These figures represent the “legislated” amount, which may be different than the amount actually spent (see Duncombe and Yinger 2005, pp. 514–15).

7. In this method, known as “Professional Judgment Panels (PJP),” teams of educators design an instructional program to achieve a stated educational outcome for various student populations and then the program costs are estimated.

California, each using a different method (Chambers, Levin, and DeLancey 2007; Imazeki 2007; Sonstelie 2007). The estimated supplemental costs for educating EL and poor students also varied widely across these three studies.

Three conclusions were derived from this review. First, the costs of educating disadvantaged students are substantially higher than the costs of educating non-disadvantaged students and substantially higher than the supplemental funding currently provided by most states. Second, there is little consensus on either the specific amount or the types of additional resources needed to educate them. Third, there is also little consensus on differences in the costs and resources needed to educate English learners versus economically disadvantaged students. Some studies find that the relative costs for educating these two student populations vary by grade level (e.g., Sonstelie 2007, p. 92), while other studies find that they depend on the nature of the EL population (National Conference of State Legislatures 2005). Different estimates may also result from how the economically disadvantaged population is defined—a broader definition that includes both poor and low-income students may yield a higher relative weight for this larger population of students and fewer additional resources needed for ELs, since a majority of English learners are economically disadvantaged (Baker 2006; Duncombe and Yinger 2005).<sup>8</sup> But even when a broader and more inclusive definition of economically disadvantaged is used, a lack of consensus remains. One panel of experts in the recent California Professional Judgment Panel study concluded that the additional resources needed to educate poor and low-income ELs would be twice those needed to educate poor and low-income English background students, whereas another expert panel concluded that hardly any additional resources would be needed to educate ELs beyond those needed to educate poor and low-income students, in part because the per pupil weight for poor and low-income students was much higher than the corresponding weight in the first panel (Chambers, Levin, and DeLancey 2007).

### Case Study Schools

Several themes emerged from the fifteen interviews with teachers and principals in the case study schools:

1. Additional time is critical. Catch-up cannot normally occur within the confines of a six-hour day, and all but one of the schools had dedicated resources to lengthening the school day and/or year. The one that had

8. Nationally, 56 percent of linguistic minority students were poor or low income in 2005 (U.S. Department of Education 2007, table 6.2), whereas in California 85 percent of EL students are economically disadvantaged (California LAO 2007, p. E-123).

not—because of insufficient resources—felt that it could not maintain its current achievement levels without additional time.

2. Computers are critical resources, especially for EL students, where they may need to catch up with lost units because of coming in late or getting behind. The computer provides the opportunity to do this catch-up outside of class or school but in a similar time frame. However, funds to update and maintain computers can drain the core budget.
3. Schools serving EL students need libraries and materials that span more than one language and often many grades because of the diversity in students' backgrounds. They also need primary language books and materials that can go home to help parents support their children's homework or exploratory reading. Schools also contend that more investment needs to be made in materials and the people to help students access them.
4. Communication with parents is critically important, and schools required additional resources, such as translators or translating machines, funds to support meetings by paying professional staff to be present, and funds to provide materials and snacks for parents.
5. With respect to professional development, collaboration was a need that almost all respondents commented on—the need to share knowledge and skills with each other, and also the opportunity to plan and organize the curriculum both horizontally among peers at the same grade level and vertically among teachers serving the same students in the EL program. Providing substitutes for the times that teachers are out of the classroom for collaborative activity is costly.
6. Whether a school had a primary language support program or not, and independent of the teachers' and principals' philosophical stance with respect to bilingual education, every school needs bilingual personnel—in the office, among ancillary personnel like nurses, social workers, and counselors, and in the classroom. Whether it was through the classroom teacher (less expensive) or classroom aides (more expensive), students and families needed to be communicated with and needed to be understood. Few districts pay a stipend to teachers, though most pay extra to classified personnel for additional skills.
7. Good faculty must be recruited and retained. The strength of the leadership in the school, the environment in which teachers work, and the compensation they are provided are known to be key features in recruiting and retaining teachers. There are some costs associated with recruitment of specialized personnel, and additional costs implicated in creating an environment that will retain them. All other things being equal, school districts that can pay more for specialized skills, like bilingualism, probably can attract more qualified people.

8. Additional focus on assessment was a feature of the schools. One high school employed a person to conduct primary language assessment and argued that this was critical to their goals of retaining and graduating ELs. Schools in the sample were included because they had experienced success with the accountability system in place, and it is therefore not surprising to find that they were spending a great deal of time and resources in responding to that system. One can argue whether disproportionate time and funds are being expended on test preparation in these schools, but it is a feature of their resource needs.
9. Safety is a critical issue for schools in low-income areas. Especially at the middle and high schools, those schools must be made to feel safe for parents, students, and school personnel. This is especially true for schools serving EL and immigrant students, as a lack of familiarity with U.S. schools may engender greater concerns for safety. Principals argue that this implies additional investments in security personnel. Having a well-maintained, attractive environment also conveys a sense of safety. To this end, some principals talked about expending funds on maintaining the grounds, landscaping, etc.

## 6. SUMMARY

Table 1 synthesizes the data and information we collected into a matrix of comparative resource needs. In the matrix we attempt to address the critical question: what resources are needed to meet the four different goals for EL students, and how do they differ from those required for native English speaking low-income students?<sup>9</sup> We make the assumption here that meeting the needs of low-income English speakers would require addressing *at least* the second goal or standard: acquiring academic English and maintaining grade-level academic performance. We also assume that some low-income children, especially those from dialect communities, will require English language development with a focus on academic English. Hence the differences in resource needs for language development *may* differ more in kind than in quantity, though this remains an empirical question. As no one has yet figured out how to close achievement gaps between poor and middle-class children, the fourth standard remains an important but elusive goal that requires going far beyond existing data to resolve. We can only guess at what the actual resource needs may be to meet this standard, and it is not clear

9. As noted earlier, the majority of English learners in California are economically disadvantaged, so we assume that all ELs will require the same additional resources required for low-income students. The minority of ELs who are not economically disadvantaged would primarily need additional resources to learn English, but otherwise would not need additional resources to meet standard 2.

**Table 1.** Resources to Educate All Students and Additional Resources Needed to Educate Low-Income and Linguistic Minority Students

<b>Resources</b>	<b>All Students (Baseline)</b>	<b>Additional Resources for Low-Income (LI) Students Goal 2</b>	<b>Additional Resources for LM Goal 1</b>	<b>Additional Resources for LM Goal 2</b>	<b>Additional Resources for LM Goal 3</b>	<b>Additional Resources for LM Goal 4</b>
Teachers (reduced student/teacher ratio)	Appropriately credentialled "highly qualified"	Additional teachers for reduced student/teacher ratio	Appropriate credential for EL or bilingual	*	Additional bilingual teachers—recruitment and retention \$	Probably additional time pre-K and throughout
Instructional time	Sufficient instructional time to learn standards	Additional time to catch up and maintain standards; pre-K	Additional time to learn English			
Professional development	Additional days for higher standards Time for teacher collaboration	Focus on special needs of low income	Focus on EL	Additional focus on academic needs for LM	Additional focus on biliteracy	
Support personnel	Counselors School psychologists Librarians Nurses	Additional counselors Social welfare workers	Bilingual support personnel			Probably family support personnel; tutors
Instructional materials; technology	Textbooks Computers and software Library books	ELD materials Additional range of materials to meet wider needs	ELD for EL Bridge materials	ELD for LM Additional technology to extend time, esp. secondary	Bilingual materials and texts	Probably materials for home

Table 1. Continued

Resources	All Students (Baseline)	Additional Resources for Low-Income (LI) Students Goal 2	Additional Resources for LM Goal 1	Additional Resources for LM Goal 2	Additional Resources for LM Goal 3	Additional Resources for LM Goal 4
Assessment materials	Appropriate assessment materials	Broader range of assessments	Primary language assessments/ alternative assessment		Higher level bilingual assessments	
Parent involvement	Basic funds for support staff for parent involvement	Additional funding for hospitality, parent coaches, outreach	Additional funding for translation of parent materials			Probably much more parent support
Enrichment		Social-cultural capital building	Increased exposure to English			Substantial social support system
Safe, secure, welcoming environment	Basic facilities maintenance	Additional security personnel and environmental enhancement for low-income areas		Cross-cultural social capital building		

\*Additional resources may depend on whether bilingual teachers are used.

how they would differ for English learners and other low-income children from socioeconomically disadvantaged communities. Finally, resource needs will probably differ according to whether students are assigned to a bilingual or monolingual teacher, independent of program goals, and it is difficult to capture this difference in a simple matrix.

What, then, are the differences in the resource elements needed for ELs, linguistic minority students, and other low-income and ethnic minority students to achieve standard 2? We can only say with certainty that personnel and materials that use the students' primary language and are created with language difference in mind would be truly additional. There may also be additional resource needs in the area of technology. Assessments in the students' primary language, ELD materials that are designed for non-English speakers, and teachers and staff who speak the languages of the students and are trained to respond to their needs are the obvious additions. We surmise that to maintain grade-level competencies would probably require more of an effort at building social and cultural capital than schools now do, but this, too, remains an empirical question. To a large extent, most of the needed additional resources can be easily accessed. With some additional effort in recruiting teachers with bilingual and bicultural skills, and possibly some additional incentive for them to come into education and remain there, as well as resources to aid teachers in becoming multilingual, most of these resource needs could be met. Primary language assessment, for example, may also be designed to be useful for assessing skills of those students acquiring other languages, and certainly skilled, multilingual teachers and other staff would be a tremendous asset to any school also wanting to provide language enrichment for its English-only students. In sum, English learners and other linguistic minority students *do* require additional resources, above and beyond those of all other students, but their needs appear to differ more in kind than in quantity from those of poor and low-income students who are also struggling with developing broader vocabularies, a command of academic English, and familiarity with the cultural capital that are such important academic assets for the middle class. English learners may also require some additional instructional time above and beyond other poor children who are English speakers, but this, too, would vary greatly depending on the EL students' schooling and social class backgrounds. Some of our case study respondents argued that low-income, dialect-speaking black students require as many or more resources as EL students. Table 1 assumes that resources are cumulative moving across categories from left to right.

The needs of secondary EL students also differ to some extent from those of elementary school ELs, and much research remains to be done to understand these differences better. However, some things are known: secondary students have less time to acquire essential skills, thus requiring extended

time in school and more intense, and informal, opportunities to interact with English speakers. They also require teachers who are appropriately trained to address motivational issues of adolescent ELs (see Meltzer and Hamann 2006), and to achieve biliteracy may require some teachers with a capacity in both the students' native language and the disciplinary area. However, this latter resource can vary considerably depending on the instructional model chosen.

A final word about the resources needed to achieve standard 3—biliteracy. We believe that if all of the resources listed in table 1 were in place to achieve standard 2, the task of achieving biliteracy for all students would be more a question of deploying existing resources than acquiring additional ones. A skilled bilingual teacher can provide literacy instruction in two languages within the parameters of the normal school day and without jeopardizing—in fact in many cases enhancing—the ability of students to meet the standards set for all pupils. We have many successful models to draw on (Slavin and Cheung 2005; August and Shanahan 2006). Hence the decision to try to achieve standard 3 is primarily a question of policy rather than of resources once the basic needs of English learners have been met.

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## REFERENCES

- American Educational Research Association, American Psychological Association, and National Council for Measurement in Education (AERA/APA/NCME). 1999. *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.
- August, D., and T. Shanahan, eds. 2006. *Developing literacy in second language learners: Report of the National Literacy Panel on Language Minority Children and Youth*. New York: Lawrence Erlbaum Associates.
- Baker, B. D. 2006. Evaluating the reliability, validity, and usefulness of education cost studies. *Journal of Education Finance* 32: 170–201.
- Baker, B. D., L. Taylor, and A. Vedlitz. 2004. *Measuring educational adequacy in public schools*. Available [http://bush.tamu.edu/research/faculty\\_projects/txschoolfinance/papers/MeasuringEducationalAdequacy.pdf](http://bush.tamu.edu/research/faculty_projects/txschoolfinance/papers/MeasuringEducationalAdequacy.pdf). Accessed 4 August 2007.
- California Department of Education. 2007. *Dataquest*. Available <http://data1.cde.ca.gov/dataquest/>. Accessed 29 July 2007.

California Legislative Analyst's Office (LAO). 2007. *Analysis of the 2007–08 budget bill*. Sacramento, CA: LAO. Available [www.lao.ca.gov/analysis\\_2007/education/ed\\_anlo7.pdf](http://www.lao.ca.gov/analysis_2007/education/ed_anlo7.pdf). Accessed 28 April 2007.

Carpenter-Huffman, P., and M. Samulon. 1981. *Case studies of delivery and cost of bilingual education*. Santa Monica, CA: Rand Corporation.

Chambers, J. G., J. Levin, and D. DeLancey. 2007. Efficiency and adequacy in California school finance: A professional judgment approach. In *Getting down to facts: A research project examining California's school governance and finance systems*, edited by S. Loeb, A. Bryk, and E. Hanushek. Stanford, CA: Stanford University, Institute for Research on Education Policy and Practice.

Duncombe, W., A. Lukemeyer, and J. Yinger. 2004. Education finance reform in New York: Calculating the cost of a “sound basic education” in New York City. Policy Brief No. 28, Syracuse University.

Duncombe, W., and J. Yinger. 2005. How much more does a disadvantaged student cost? *Economics of Education Review* 24: 513–32.

*Education Week*. 2005. Quality Counts 2005. No small change: Targeting money toward student performance. *Education Week* 24 (17).

Esch, C. E., C. M. Chang-Ross, R. Guha, D. C. Humphrey, P. M. Shields, J. D. Tiffany-Morales, M. E. Wechsler, and K. R. Woodworth. 2005. *The status of the teaching profession 2005*. Santa Cruz, CA: Center for the Future of Teaching and Learning.

Gándara, P., J. Maxwell-Jolly, and A. Driscoll. 2005. *Listening to teachers of English learners: A survey of California's teachers' challenges, experiences, and professional development needs*. Santa Cruz, CA: Center for the Future of Teaching and Learning.

Gándara, P., R. W. Rumberger, J. Maxwell-Jolly, and R. Callahan. 2003. English learners in California schools: Unequal resources, unequal outcomes. *Educational Policy Analysis Archives* 11 (36). Available <http://epaa.asu.edu/epaa/vin36/>.

Genesee, F., K. Lindholm-Leary, W. Saunders, and D. Christian. 2006. *Educating English Language Learners: A synthesis of evidence*. New York: Cambridge University Press.

Imazeki, J. 2007. Assessing the costs of K–12 education in California's public schools. In *Getting down to facts: A research project examining California's school governance and finance systems*, edited by S. Loeb, A. Bryk, and E. Hanushek. Stanford, CA: Stanford University, Institute for Research on Education Policy and Practice.

Meltzer, J., and E. Hamann. 2006. *Meeting the literacy development needs of adolescent English language learners through content area learning, part one: Focus on motivation and engagement*. Providence, RI: Education Alliance at Brown University.

National Conference of State Legislatures. 2005. *Arizona English language learner cost study*. Washington, DC: National Conference of State Legislatures.

Parrish, T. 1994. A cost analysis of alternative instructional models for limited English proficient students in California. *Journal of Education Finance* 19: 256–78.

Parrish, T. B., A. Merickel, M. Perez, R. Linqanti, M. Socias, A. Spain, C. Speroni, P. Esra, L. Brock, and D. DeLancey. 2006. Effects of the implementation of Proposition 227 on the education of English learners, K–12: Findings from a five-year evaluation. Palo Alto, CA: American Institutes for Research and WestEd.

Rebell, M. 2007. Professional rigor, public engagement, and judicial review: A proposal for enhancing the validity of education adequacy studies. *Teachers College Record* 109 (6): 1303–73.

Rothstein, R. 2004. *Class and schools: Using social, economic, and educational reform to close the black-white achievement gap*. Washington, DC: Economic Policy Institute.

Rumberger, R. W. 2003. *Certification of California teachers providing instructional services to English learners, 1997–98 to 2001–02*. Available <http://lmri.ucsb.edu/publications/elfacts.php>. Accessed 26 July 2003.

Rumberger, R. W. 2006. *The growth of the linguistic minority population in the U.S. and California, 1980–2005*. Available <http://lmri.ucsb.edu/publications/elfacts-8corrected.pdf>. Accessed 13 July 2007.

Rumberger, R. W., and P. Gándara. 2004. Seeking equity in the education of California's English learners. *Teachers College Record* 106 (10): 2032–56.

Rumberger, R. W., P. Gándara, and B. Merino. 2006. Where California's English learners attend school and why it matters. *UC LMRI Newsletter* 15 (2): 1–2.

Saiz, A., and E. Zoido. 2005. Listening to what the world says: Bilingualism and earnings in the United States. *Review of Economics and Statistics* 87: 523–38.

Slavin, R. E., and A. Cheung. 2005. A synthesis of research on language of reading instruction for English language learners. *Review of Educational Research* 75: 247–84.

Sonstelie, J. 2007. Aligning school finance with academic standards: A weighted-student formula based on a survey of practitioners. In *Getting down to facts: A research project examining California's school governance and finance systems*, edited by S. Loeb, A. Bryk, and E. Hanushek. Stanford, CA: Stanford University, Institute for Research on Education Policy and Practice.

U.S. Department of Education, National Center for Education Statistics. 2007. *The condition of education: Participation in education*. Available <http://nces.ed.gov/programs/coe/2007/section1/indicator06.asp>. Accessed 29 July 2007.