

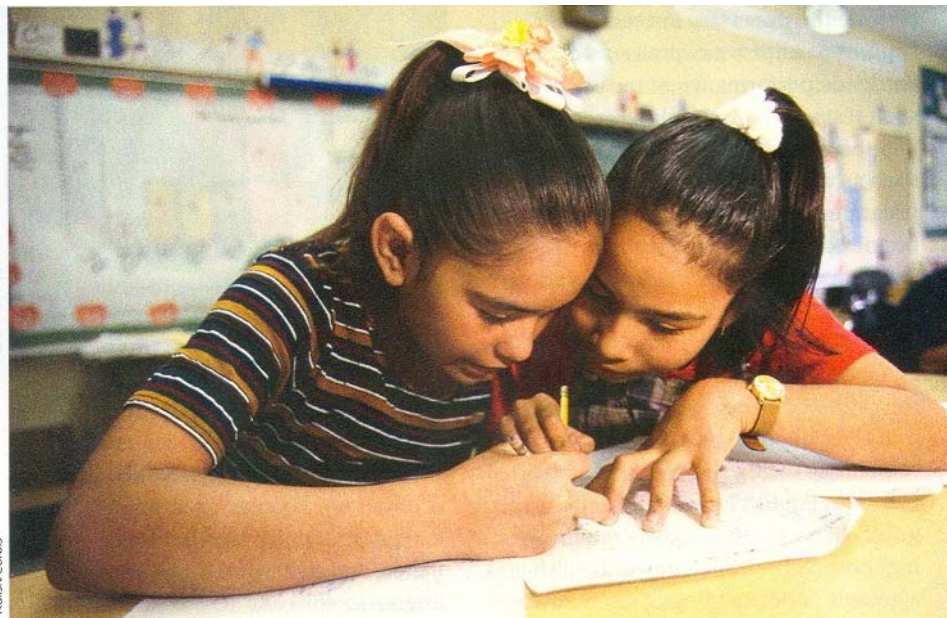
The English They Need for the Test

*English language learners require instruction
in academic English to make the grade on high-stakes tests.*

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Since the passage of the No Child Left Behind Act (NCLB) in 2001, high-stakes testing has come to exert an increasing influence on education practice in our schools. Standardized testing now starts as early as Head Start and continues through the high school exit exams that many states require. This torrent focus on high-stakes testing in the United States has troubling consequences for the education of English language learners.

By holding schools accountable for the academic progress of all categories of students, NCLB has the potential to create greater education equity. However, in light of the punitive measures that can be visited on schools whose students do not face well on such tests, the heavy emphasis on high-stakes examinations is resulting in even greater inequities especially for English language learners. Schools across the United States have reported low performance levels on such tests for their linguistic and cultural minority students. These students include not only English language learners but also students who speak dialects of English that differ from the kind of English promoted and used in school, it's no surprise that teachers are wondering how they can find time to support students' language development when there is so much else to cover.



What the Numbers Show

In California, one in four students is an English language learner, for a total of 1.6 million such students in the state. Figure 1 (p. 47) shows the national percentile ranks of average student scores on the math subtest of the California Achievement Test in grades 2, 4, 6, 8, and 10. The chart compares two groups: English-only/fluent English proficient students and English language learners. The average scores of English language learners on standardized math tests steadily decline over time, to reach their lowest points in 8th and 10th grade. Reading and language standardized test scores of English language learners in California have shown similar declines as students move toward 10th grade. The substantial test score gap in all academic areas

between English language learners and other students is worrisome for schools because performance on these tests matters. Perhaps most seriously, high-stakes testing has the potential to undermine English language learners' opportunities for high school graduation and education beyond high school. If we look at the trends in the performance of California 10th graders who are learning English on reading, language, and math standardized tests, we can predict that most English language learners in California will find the California High School Exit Examination difficult if not impossible to pass because the test covers English literacy and mathematics. At present, 25 states require such tests for graduation from high school, with other states planning to follow suit. These tests involve the highest possible stakes in public education because they can limit subsequent economic opportunities for students who fail them.

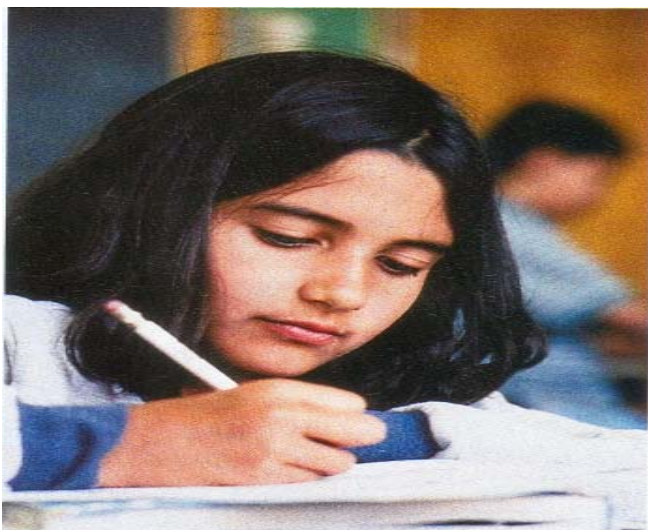
The stakes are equally high for schools. It is a matter of survival for schools, teachers, and curriculums to provide the necessary instructional support to improve overall student academic performance as treasured by such tests. So far, schools have implemented only relatively low-level fixes; such as the adoption of instructional programs that emphasize basic skills and phonics in reading or that focus on facts and *procedures* in math. Such solutions may offer students short-term gains in test scores, especially in the primary grades. As long as the tests stay close to the skills and materials covered in basic skills instruction, students perform reasonably well, even when their proficiency in English is limited. By 4th grade, however, when *tests require* a higher level of proficiency in English and a greater understanding of content, the performance of English language learners on these tests begins to decline.

The Other English

What English language learners' need and what teachers should provide—is training in the academic English skills that are foundational to literacy, mastery of subject matter, and superior test performance. The term *academic English* is based on a distinction that Jim Cummins made when he argued that proficiency in language involves layers of skills and knowledge (1979, 1983, 2000). The earliest and most basic acquired language skills consist of the words, structures, and devices that figure in everyday, face-to-face social interactions, language that is more socially than cognitively demanding. Children acquire this kind of language proficiency through interactions with caregivers, family members, and playmates, and they usually possess these linguistic skills and resources by the time they first enter school, regardless of the language spoken at home.

English language learners easily acquire these basic language skills when they come into contact with English at school, often within a year or two. Although these skills suffice in the earliest years, however, they are far from all that is needed for the learning that takes place in the classroom, especially after 3rd or 4th grade. Once students reach upper elementary school, the linguistic demands of school quickly change. Text materials and the language of instruction evolve to a markedly different form so they can communicate more advanced and complex subject matter. The language becomes more precise in reference and more complex in structure. In addition the vocabulary begins to include more Latin- and Greek-based words than words with Anglo-Saxon roots (Corso 1997), as well as words expressing abstract concepts.

To make sense of the information taught in school, students must become proficient in the academic English use by these texts and instruction—and by high-stakes tests.



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Tackling Math-In English

The difficulties that English language learners are likely to encounter in language tests are obvious. Problems with language also present themselves in math tests, however, and these are perhaps more troublesome because they can easily go unnoticed. Even the simplest word problems call for the test taker to interpret the text and recognize that ordinary words may have quite specialized meanings in the math realm as is evident in the following 6th grade math test item from the Massachusetts Comprehensive Assessment System (www.doe.mass.edu/ntcas/2003/release):

Students in M4r. Jacob's English class were giving speeches. Each student's speech was 7 to 10 minutes long. Which of the following is the *best* estimate for the total number of student speeches that could be given in a 2-hour class?

- A. 4 speeches
- B. 8 speeches
- C. 13 speeches
- D. 19 speeches

The only technical math term used in this item is the expression *best estimate*, which tells the test taker that the correct answer will be more likely or more believable than the other answers given the statement of the problem. A first glance, this problem is simply stated, and both the vocabulary and the calculations called for are fairly straightforward: The estimate will fall between the number of 7-minute speeches that can be given in 120 minutes (17) and the number of 10-minute speeches that can be given in the same time period (12). Therefore, C-13 speeches-is the correct answer.

But is it that simple? Not for many English language learners, they must understand that the time given for each speech is a range, meaning that each speech is between 7 and 10 minutes long. The test taker must also successfully interpret the question posed. To do this, he or she will need to unpack several grammatical features typical of academic English structures. The first is a complex noun phrase structure: the best estimate for the total number of student speeches that could be given in a 2-Hour class, This in turn contains a complex prepositional phrase for the total number of student speeches that could be given in a 2-hour class-that itself contains a relative clause construction: that could be given in a 2-hour class. In addition, the complex noun phrase contains the passive construction could be given-a type of construction frequently encountered in academic English. As long as the test taker is familiar with the expression to give a speech and the passive construction in English, this in itself is not difficult to interpret.

The following problem, taken from preparation materials for the California High School Exit Examination (www.cde.ca.gov/ta/tg/hs/resources.asp), provides another illustration:

A submarine is 285 feet under the surface of the ocean. A helicopter is flying at 4,500 feet above sea level. Given that the helicopter is directly above the submarine, how far apart are they?

- A. 285 feet
- B. 4,215 feet
- C. 4,785 feet
- D. 4,500 feet

Mathematically, this is a simple arithmetic problem: $285 + 4,500 = 4,785$, yet many students struggle with the problem. What makes it difficult? First, test takers must be able to envision the scene described in the problem. It calls for considerable background knowledge, triggered by specific vocabulary and expressions, such as *helicopter*, *submarine*, *surface of the ocean*, and *sea level*. The test taker must know that *sea* and *ocean* are used as synonyms here and that *sea level* and *surface of the ocean* refer to the same baseline. Further, it would help to know that the term *sea level* is an abstraction and that sea level can apply to places miles away from an ocean-Denver, for example, is a mile above sea level-and that places can be below sea level but not literally under the surface of the ocean-Death Valley, for example, is 282 feet below sea level.

There are other difficulties. The problem asks how far apart the helicopter and the submarine are. It does not specify whether the distance is to be thought of as horizontal or vertical. The student must construe this information from the positions given for the submarine and the helicopter: The first is 285 feet *under the*

surface of the ocean; the second is 4,500 feet *above sea level*. The most important information is contained in a conditional construction (*given that*) that English language learners are quite unlikely to have encountered before. Test takers most likely will have difficulty realizing that the information introduced by this expression is crucial to interpreting the problem. Prepositional phrases are also notoriously difficult for English language learners, and this short math problem contains five. Moreover, English language learners may have difficulty interpreting pronoun references. The word *they-as in how far apart are they*-tends to be especially problematic because it can refer to people or objects, so students may not understand that the pronoun in the test item refers to the helicopter and the submarine.

FIGURE 1 California Achievement Test Results-Math Subtest

National Percentile Ranks/ Average Student Score	Grade 2	Grade 4	Grade 6	Grade 8	Grade 10
All Students	58	51	51	47	50
English-Only/ Fluent English-Proficient	65	59	59	54	55
English Language Learners	44	34	25	22	24

The complete score report: s available at <http://star.cde.ca.gov/star2004>.

Surviving High-Stakes Tests

English language learners must acquire the language skills needed for everyday communication-skills that native speakers of English usually bring to school-as well as those needed for subject-matter learning. Children do not learn this kind of language on their own or through immersion in an English-speaking environment. Mastering academic English-and thus surviving high-stakes tests-requires instructional activities that actively promote language development in the context of learning intellectually challenging content.

Project Challenge

Boston University researchers and educators Suzanne Chapin, Catherine O'Connor, and Nancy Anderson (2003) have been collaborating with classroom teachers in Chelsea, Massachusetts, since 1998 to demonstrate that English language learners and other underachieving students in low-income, urban schools can develop the language and discourse skills typical of higher performing students. Project Challenge-a math program funded by a grant from the U.S. Department of Education and designed to meet and surpass the state of Massachusetts's math standards-sought to provide urban students with opportunities that would enable them to successfully pursue higher-level math in high school and college. The demanding math curriculum was aligned to the standards adopted by the National Council of Teachers of Mathematics.

The researchers and educators recruited at-risk students who seemed to have potential talent in mathematics on the basis of a set of nonstandard measures. Most of the students appeared average on these measures and had significant gaps in their knowledge base, lacking knowledge of such topics as fractions, for example, or how math is used in sports. Two-thirds of the students participating in the program were English language learners, mostly Latinos; the remaining students were members of other typically underachieving minority groups.

The researchers and teachers worked with four cohorts of 100 4th graders. A new 4th grade cohort was added each year as the previous one advanced a grade. Between the 4th and 7th grades, the students tackled a challenging math curriculum designed to develop their understanding of content and improve their ability to solve complex math problems. Each day, students received an hour of scaffolded instructional support from their teachers that emphasized integrating their knowledge of various topics and taking responsibility for their own learning.

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English in the Math Class

Project Challenge teachers encouraged students to talk about their reasoning and evolving understanding of the problems that they were working on. Using a technique called *revoicing*, a Project Challenge teacher would repeat some or all of what the student had just said, thereby clarifying and modeling a more fully realized version of the student's statement. The teacher would also ask students to restate the contributions of classmates: "can you repeat what she just said in your own words?" Students in the program come to realize that they must not only listen to one another, but they must also try to understand what has been said so they can paraphrase or repeat it for the class.

Project Challenge teachers also asked students to comment on their classmates' understanding of a problem and the reasoning behind it: "Do you agree or disagree with him, and why?" In this way, students become more aware of their own and their classmates' thinking processes and of the various strategies used in problem solving. Project Challenge teachers stressed that math had to make sense to the students, that understanding counted more than getting the right answer. Over time, the students in the program became increasingly adept at explaining their thinking, and they gained a greater understanding of how mathematical thinking works.

By 2002, the Project Challenge team had worked with 400 middle school students from the Chelsea, Massachusetts, and schools. Team members had outstanding results to report. Project Challenge used the Massachusetts Comprehensive Assessment System (MCAS) as well as the California Achievement Test (CAT), which served as a check on MCAS scores. In both assessments, Project Challenge students achieved mean scores in the 87th *percentile*, *outperforming* students in the state of Massachusetts as a whole and even those in high-performing districts. After just one year in the program, 57 percent of Project Challenge students were scoring at the advanced or proficient level on the MCAS mathematics test significantly higher than Massachusetts's students as a whole, whose average score was 38 percent (Chapin & O'Connor, 2004).

Making the Grade

When schools provide English language learners with these kinds of instructional supports, students can develop the language and academic skills they need to succeed in school. But it takes education leadership: The intervention in Project Challenge schools began with an intensive program of professional development for the teachers involved (Chapin et al., 2003). This training could not have happened without administrative support.

Fortunately, there are a number of things that leaders in our schools can do to help English language learners succeed in this era of high-stakes testing. Foremost, school leaders need to acknowledge the role that academic English plays in test performance and, of course, in learning in the classroom; they then need to raise awareness of the issue in their schools.

At present, few educators know what academic English is or how to distinguish it from other forms of English. One way of raising awareness is to organize study groups for teachers so they can look at the language used in textbooks for various subjects across the grades. Beginning with a concise description of academic language and its grammatical features (see Biber, Conrad, & Reppen, 1998) should help teachers familiarize themselves with the ways in which the language of academic texts differs from other forms of English. A number of reference books can also help teachers talk about the language that they find in textbooks (Celce-Murcia & Larsen-Freeman, 1998; Huddleston & Pullam, 2001). Schools should encourage and provide opportunities for all teachers to participate in professional development activities that focus on the role that language plays in specific grade levels and in content classrooms (Fillmore Snow, 2002). Professional development may involve focused workshops on language development and academic English or forums of exchange—either formal or informal—among teachers in different disciplines.

Any professional development program that targets academic English should encourage teachers to include language objectives alongside content objectives in daily lesson plans. These language objectives remind teachers and students alike to pay attention to features of academic English, such as those illustrated here, language objectives may focus on academic English vocabulary, common academic English structures, or such language functions as explaining, defending, and discussing. Highlighting academic language—however briefly—as an objective in every lesson enhances student awareness of academic English and promotes student achievement. English language learners can make the grade, even on the toughest tests, provided they get the instructional support they need.