

tudents whose first language is not English constitute the fastest-growing demographic group in our public schools. The U.S. Census predicts that these students will make up 40 percent of the school-age population by the 2030s, yet at present most schools are dramatically under-educating this group. Nationwide, the achievement gap between average native-English speakers and former English learners now placed in the mainstream curriculum is very large. This gap, as measured by standardized achievement tests administered to both groups in English toward the end of high school, is illustrated by the difference between average scores at the 50th national percentile for native-English speakers and the 11th percentile for the majority of former English learners. Furthermore, the largest numbers of drop-outs come from this demographic group; for example, 46 percent of foreign-born Hispanic students drop out of school.

If U.S. schools continue their present programs for English learners, we can expect school district and statewide test scores in the U.S. to decline steadily, since an increasingly greater percentage of those tested are in this low-scoring group of English learners. To counter this trend, it is necessary for states and school districts to reexamine their current policies and practices for educating this demographic group.

SEGREGATED OR INTEGRATED SCHOOLING?

Half a century ago, U.S. courts and education institutions made a commitment to end racially segregated schooling. Yet many other forms of segregated schooling remain. Specialists pull students out of their classrooms for one-on-one or small group remediation. Teachers continue to divide students into ability groups, which can lead to permanent groupings. Secondary schools develop "tracks," based on course sequences and ability groupings. Segregated classes abound for students placed in special education, English as a Second Language (ESL), and bilingual education. Neighborhoods segregated by socioeconomic status result in segregated neighborhood schools.

MEANS Better Schools for All

by Virginia P. Collier and Wayne P. Thomas

Many researchers have documented how the devastating effects of tracking, ability grouping, and other forms of separating students can lead to social perceptions of inadequacy and eventually to low achievement.4 Students in segregated contexts in inner-city schools often are not aware of the challenges that await them when they leave their familiar community, and to continue schooling becomes an overwhelming prospect. How can we apply these experiences to the schooling of students who initially know no English and who need lots of support to reach grade-level achievement in their second language? These students are often the most segregated of all, especially when they are placed in special programs to assist them with learning English.

SEGREGATED PROGRAMS FOR ENGLISH LEARNERS

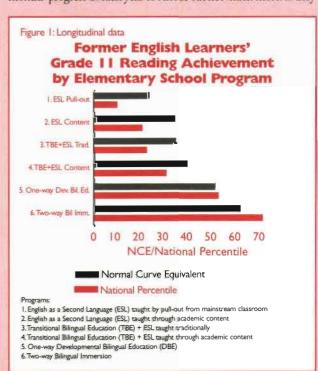
ESL pull-out. The most common program for teaching English to speakers of other languages is ESL pull-out, which is not a true bilingual program as it does not offer instruction in the student's native language. This is also the least effective and the most costly model. ESL pull-out is expensive because it requires that extra ESL resource teachers be added to the teaching staff of each school.5 Also, students often miss important academic subjects while attending the ESL class. Furthermore, in ESL pull-out, mixed ages, varied proficiency levels in English, and many different subjects to be taught make it very difficult for students' needs to be met. Segregated while in the ESL pull-out class, and viewed by peers as pulled out because they're not doing well, these students often become socially stigmatized, leading to lower achievement over time.6

Students usually receive ESL pull-out support for 2 to 3 years. Typical end-of-school achievement for graduates of ESL pull-out is the 11th percentile, and its drop-out rate is highest among the programs provided for English learners.7 Figure 1 provides an overview of our combined longitudinal research findings from 10 school districts in many regions of the U.S., following approximately 50,000 students of low socioeconomic background, who entered U.S. schools in kindergarten with no proficiency in English. Their achievement level on the standardized, norm-referenced test as they approached the end of high school is broken down by the program they received during the elementary school years.8

Transitional bilingual education. The most common bilingual program in the U.S. for teaching English to speakers of other languages, while at the same time keeping students on grade level in their primary language, is transitional bilingual education. As traditionally practiced, this is the least effective and the most segregated model of bilingual schooling. Transitional bilingual classes are usually self-contained, so students have few chances in the school day to interact with native-English speakers mainly during recess, lunch, and specials. Students in these segregated classes are often viewed by their native-English-speaking peers as lower achievers in school. These programs generally last 2 to 3 years, after which students are placed in the English mainstream. Typical end-of-school achievement for graduates of transitional bilingual classes of this type is the 24th percentile.9 While this is a better result than with ESL pull-out, continuing to under-educate an increasingly large segment of the U.S. population is not a worthwhile goal.

Consequences of segregated remediation. For the past four decades, as districts have developed various models for educating English learners, we have generally taken the deficit perspective. That is, once a student is assessed as not yet proficient in English, we view this as a problem to be remediated. The remedial route is costly because then we need specialists to "fix the problem." Extra staff are an expensive budget item. Also, in a segregated, remedial program, English learners tend to receive less access to the standard grade-level curriculum. While English learners are in the separate program, the achievement gap often increases, as native-English speakers gain another 10 months of achievement across the curriculum with each year of school, while English learners are focused on learning English, with less emphasis on grade-level curricular mastery. When these students exit the most common short-term ESL or bilingual programs, they typically score at the 10th percentile in English. They then need to make 15 months' progress in 10 months' time for six years in a row to eventually catch up to the native-English speakers, who are surging ahead, rather than sitting around waiting for the English learners to catch up with them.10

This monumental catch-up cannot easily be accomplished by any group without accelerating students' learning (making more than one year's progress in each year of school). Since ESL pullout graduates leave high school at the 11th percentile, having begun the mainstream curriculum at the 8th percentile, they have made 10 months' progress in each year of school but not much more. If they



graduate—and many do not—their work and further schooling options are very limited. But this unfortunate outcome can be prevented if more effective school programs are provided.

INTEGRATED PROGRAMS FOR ALL

Several solutions to these school policy dilemmas have emerged over the past two decades. The most astounding results in high student achievement have come from an integrated program model that uses two languages-English and another language spoken by a large number of students of the community-to teach the entire grade-level curriculum to both language groups. This type of innovative enrichment program has many names: dual language, bilingual immersion, two-way bilingual, and developmental bilingual education.

Two-way bilingual immersion. This program was first introduced in the U.S. in 1963, in Dade County, Florida. At that time, large numbers of Cuban immigrants had established their own private bilingual schools. The public schools were losing significant enrollment, and to attract students back, they developed two-way bilingual schools for English and Spanish speakers to be schooled together in their two languages. These classes provided a half day of the grade-level curriculum through English and a half day through Spanish, with resulting reenrollment of students and eventual high achievement.11

During this same period, English-speaking parents in Canada initiated the development of French-English schooling for their children, known as immersion education. Immersion is a commitment to bilingual schooling throughout grades K-12. In the U.S., the term "immersion education" has been incorrectly used by the U.S. media to refer to English-only immersion for immigrants. However, language educators have for a half-century used the term immersion to refer to a dual-language curriculum, with emphasis during the first two years on more schooling in the minority language. That is because the minority language is more difficult to develop since it is not supported by the broader society, and academic uses of the language are less easily acquired. In immersion programs, students are instructed 90 percent of the school day during kindergarten and 1" grade in the minority language chosen for the program, and 10 percent of the day in the majority language, in this case English. With each subsequent grade, more English is introduced until the curriculum is taught through an equal amount of instructional time in each language, usually by 4th or 5th grade. In Canada this program enjoys immense popularity today and has achieved high rates of success with majority and minority students of middle- and low-income families, as well as students with learning disabilities.12

In the U.S., this bilingual immersion model has been implemented as a two-way bilingual program referred to as the 90-10 model, in contrast to the 50-50 two-way model that was developed in Dade County. California and Texas have implemented the largest number of 90-10 bilingual schools, and these schools have reached even higher achievement levels than the 50-50 model.13 Graduates of effective 90-10 and 50-50 two-way bilin-

gual schools typically achieve at the 70th percentile by the end of schooling, having reached the 50th percentile in their second language by 6th or 7th grade, and having maintained at least 50th percentile achievement in their first language throughout the elementary school years while acquiring their second language. These patterns of high achievement are present for children of low-income and middle-income background, majority and minority.14

The key to the success of all two-way bilingual programs is that this is an integrated program, designed for all students to be schooled together throughout the school day. Using the natural resources of the community, speakers of the minority language are peer tutors for the native-English speakers learning the curriculum through the community language, while the native-English speakers provide for the English learners meaningful and natural access to English for both language and content development. Students do not have to waste time in language classes that focus only on language development. They can accelerate their cognitive and academic growth through cognitively complex grade-level tasks that stimulate both language and subject-area learning. In two-way bilingual classes, focus is on the core academic curriculum (not watered down), separation of the two languages of instruction (no translation allowed and no repeating of lessons in each language), positive interdependence among students (established through cooperative learning activities), and high-quality instructional personnel. Teachers alternate the language of instruction by theme or subject area, by time of day, by day of the week, or by the week 15

This is the least costly program model for English learners, when two teachers team and exchange two classes, one teacher instructing only through English, and the other teacher instructing only through the chosen community language (e.g., Spanish, Korean, French, Cantonese, Navajo). 16 These classes can also be cost-effective and academically successful when taught by a single teacher who is fully proficient in academic uses of the two languages, but nationwide there is a shortage of such qualified bilingual teachers.

One-way developmental bilingual education. Virtually identical to two-way bilingual immersion, one-way developmental bilingual schools are common in geographic contexts where the school is demographically very homogeneous. The term one-way refers to one language group receiving schooling through two languages. For example, a school with 98 percent students of Spanish-speaking background might choose to develop a high-quality bilingual program with the goal of graduating their students proficient in both English and Spanish. Two school systems in Northern Maine that serve a 97 percent Franco-American population developed a French-English bilingual program to restore their heritage language for purposes of economic development of their region through commerce with neighboring French-speaking Canada.17 Navajo and Yupi'k students isolated from native-English speakers have greatly benefitted from accelerated learning in one-way enrichment bilingual schools in Arizona and Alaska.18

ESL content in the mainstream. Not all schools have sufficient numbers of English learners of one language background to offer one-way or two-way bilingual classes. It was for just such schools that ESL content teaching (also called sheltered instruction) was first developed in the late 1970s and early 1980s to address some of the major problems with ESL pull-out. These courses provide academic content taught by language specialists who have been trained to teach both language and content simultaneously. Vocabulary, concepts, and skills of specific subject matter are taught by using visuals, context, and modified texts so that the lessons are comprehensible to students who don't yet have proficiency in the language of instruction.19

Until recently, most ESL content programs have been taught in self-contained classes, where English learners are largely isolated from native-English speakers. Graduates of this segregated ESL content program (typically lasting 2 to 3 years) reach the 22nd percentile by the end of their high school years.20 This is much higher achievement than that of graduates of ESL pull-out at the 11th percentile, but still not high enough for continuing higher education and joining the ranks of professional workers. As with students who receive transitional bilingual education, ESL content students benefit from accelerated learning through teaching English and academic content simultaneously, but their gains are not sustained after they leave the special program. Furthermore, they are schooled for several years in a segregated context while learning English.

In just a few U.S. schools, experiments with ways to connect the English mainstream to ESL content/sheltered instruction are taking place. Integrated forms of this model may be the key to higher achievement, but these experiments are still in their infancy, and it is not yet known how students will do academically. These innovations center around teaming an ESL teacher with a mainstream teacher, and mixing native-English speakers with English learners for some of their classes. However, these inclusion models do not work as well when the ESL teacher is viewed as a tutor for the English learners, working separately in a corner. Instead, they are much more effective when the two teachers are co-teachers, sharing an equal partnership for academic learning with the whole class. To enhance the English learners' status and lessen the stigma associated with separate forms of schooling, it is especially important to affirm the bilingual/bicultural heritages of the English learners as a valuable resource not to be lost. English learners, including immigrants who have had few opportunities to receive much formal schooling before they arrived in the U.S., bring a wealth of life experiences from other geographical contexts to broaden the knowledge of the class.21

SHORT-TERM OR LONG-TERM SUPPORT FOR ENGLISH LEARNERS?

Three years of support? A second major policy dilemma is the length of time that English learners need special support. Most of the programs for English learners supported by federal and state funding have used an arbitrary limit of three years.

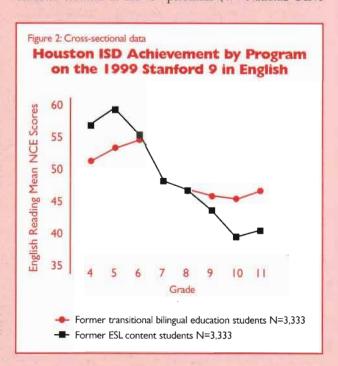
This amount of time was purely a guess on policymakers' part, but it has become institutionalized in both state and federal policies. No research study has found that academic success takes only three years. Instead, acquiring a second language for schooling is a long-term process.22 Research has shown that the length of time required for humans to develop proficiency in a second language depends on what the language will be used for, School and professional contexts are the most cognitively complex contexts of language use. In contrast, first-year foreign language classes hope to get students comfortable with, for example, ordering food in a restaurant, a cognitively simple task. But when using the new language for schooling, not only do students need to become proficient in English, they also have to acquire math, science, social studies, literature, and language arts objectives for every grade level. Thus, closing the achievement gap is much more than just learning English-it includes mastering the entire curriculum.

Eight years of support? For this reason, the number of years of support needed for English learners who have received only English instruction, even after they enter the mainstream, is at least six more years. Long-term program evaluation research has clearly demonstrated this fact.23 The greatest amount of gain that most students (including gifted students) are able to achieve in one school year is a year and a half's worth of work. As noted above, to close a gap of 40 percentiles, it takes six years of a year-and-a-half's gain (since they have to make up the schooling lost while they were learning English), a lot more than the typical native-English speaker is achieving.

Does this mean that policymakers have to provide eight years of funding support for every English learner? Not necessarily, but it does mean re-thinking state and local school policies very seriously. The key is to focus on providing quality, costeffective schooling for these students that benefits everyone. Rather than attempting quick-fix solutions such as Proposition 227 in California and Proposition 203 in Arizona (one year of support is absurd-no research study has ever found that anyone can acquire a new school language in only one year), we should establish state policies to support high-quality programs for English learners that have demonstrated success. Contrary to the newspaper headlines, the research studies on California Proposition 227 have shown that English learners have not closed the gap24--instead the gap has increased between native-English speakers and English learners. Yes, English learners have made small to modest gains-typical students do all the time—but the native-English speakers have made greater gains, and thus the achievement gap has actually widened since Proposition 227 was passed by voters three years ago.25

What has also happened is that the quality of billingual programs in California has improved, with many bilingual schools transforming into enrichment two-way bilingual models for all students. These schools have demonstrated remarkably high achievement, above the 50th percentile across all subjects, and all students in these schools have acquired not just one language but two.26 Graduating students deeply proficient in two languages, one of which is English, is of great benefit to the economy of the U.S., for in the 21st century one of the major new goals of the professional world is to hire more bilingual professionals, particularly Spanish/English bilingual staff.27 Given that 75 percent of the current English learners of the U.S. are Spanish speaking, this group is an enormous resource for U.S. schools. Instead of encouraging these students to lose their primary language as quickly as possible, Spanish speakers can be used as peer tutors in two-way classes, and both English speakers and Spanish speakers can benefit from the accelerated learning through two languages.

Here's an example of how bilingual schooling works, using some of our recent research findings from Houston, Texas.28 Figure 2 illustrates the achievement levels of two groups of students-those who received transitional bilingual schooling from kindergarten through 5th grade, and those who received an ESL content program from kindergarten through 5th grade. (Texas state law requires that bilingual schooling be provided when 20 or more students of one language background are enrolled in a school system.) Both groups in 4th grade, when first tested on the standardized test in English, were above the 50th percentile, but the ESL content graduates initially outperformed the students schooled bilingually. This is to be expected in their first testing, since the ESL content students had more hours of schooling in English. However, by 6th grade and continuing in 7th and 8th grades, the bilingually schooled students reached the same achievement level in English as the monolingually schooled students, at slightly below 50th percentile performance. By 9th grade the bilingually schooled students had begun to outperform their peers schooled only in English, and by 11th grade, this difference was statistically significant, with the bilingually schooled students at the 45th percentile (47th National Curve



Equivalent, or NCE) and the ESL content graduates schooled only in English at the 31" percentile (40th NCE). In the early grades, the bilingually schooled students stayed on grade level in their curricular subjects through receiving schooling in Spanish while they were learning English. This benefitted these students cognitively in the long term. Giving the ESL content students more English in the early years only benefitted them in the short term, but not in the long term. As was seen in Figure 1, student graduates of two-way and one-way bilingual programs achieve at even higher levels than these graduates of transitional bilingual education.

MAJOR POLICY IMPLICATIONS

In closing, we offer 12 major policy implications from our latest national research findings from our federally funded study:

- Enrichment 90-10 and 50-50 one-way and two-way developmental bilingual education programs (or dual language, bilingual immersion) are the only programs we have found to date that assist students in fully reaching the 50th percentile in both their first language (L1) and second language (L2) in all subjects and in maintaining that level of high achievement, or in reaching even higher levels through the end of schooling. The fewest drop-outs come from these programs.
- Parents who refuse bilingual/ESL services for their children should be informed that their children's long-term academic achievement will be much lower as a result, and they should be strongly counseled against refusing bilingual/ESL services when their child is eligible.
- When English learners initially attend segregated, remedial programs, these students do not close the achievement gap after reclassification and placement in the English mainstream. Instead, they maintain or widen the gap in later years. Therefore, their average achievement NCE at reclassification should be as high as possible, since this is likely to be the highest achievement level that they reach during their school years. Ideally, instructional gains are best accomplished in an enrichment (not a remedial) program.
- Students with no proficiency in English must not be placed in short-term programs of only 1 to 3 years. In this study and all other research studies following English learners long term, the minimum length of time it takes to reach gradelevel performance in second language (L2) is 4 years. Furthermore, only English learners with at least 4 years of primary language schooling reach grade-level performance in L2 in 4 years. Students with no primary language schooling (either in home country or host country) are not able to reach grade-level performance in L2 in a short-term program.
- The strongest predictor of L2 student achievement is amount of formal L1 schooling. The more L1 grade-level schooling, the higher L2 achievement.
- Bilingually schooled students outperform comparable monolingually schooled students in academic achievement in all subjects, after 4 to 7 years of dual-language schooling.

- Students who receive at least 4 to 5 years of grade-level L1 schooling in their home country before they emigrate to the U.S. typically reach the 34th NCE (23th percentile) by 11th grade when schooled all in English in the U.S. in an ESL content program, and then the mainstream. These students are on grade level when they arrive, but it takes them several years to acquire enough English to do grade-level work, which is equivalent to interrupting their schooling for 1 or 2 years. Then they have to make more gains than the average native-English speaker makes every year for several years in a row to eventually catch up to grade level.
- The highest-quality English-only ESL content programs close about half of the total achievement gap.
- When English learners exit into the English mainstream, those schooled all in English initially outperform those schooled bilingually when tested in English. But the bilingually schooled students reach the same levels of achievement as those schooled all in English by the middle school years, and during the high school years the bilingually schooled students outperform the monolingually schooled students.
- Students who receive at least 5 to 6 years of dual-language schooling in the U.S. reach the 50th NCE/percentile in L2 by 5th or 6th grade and maintain that level of performance, because they have not lost any years of schooling. All students who are raised in a dual-language environment need at least 4 years of schooling in L1 and 4 years of schooling in L2 to achieve on grade level in either of the two languages. Providing bilingual schooling in the U.S. meets both needs simultaneously, leading to high academic achievement in the long term.
- An enrichment bilingual/ESL program must meet students' developmental needs: linguistic (L1 and L2), academic, cognitive, emotional, social, and physical. Schools need to create a natural learning environment in school, with lots of natural, rich oral and written language used by students and teachers, with students' first and second languages used in separate instructional contexts with no translation; meaningful, "real world" problem-solving; all students working together; challenging thematic units that get and hold students' interest; and using students' bilingual-bicultural knowledge to bridge to new knowledge across the curriculum.39

In summary, policymakers must make major changes in current practice. Both bilingual and ESL programs must become more enriched (not remedial), more effective, more integrated with the mainstream, and sustained long enough to close the achievement gap.

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