

## LONGITUDINAL RESEARCH FINDINGS:

- English Learners submersed in the English mainstream because their parents refused all bilingual and ESL services show large decreases in reading and math achievement by Grade 5, when compared to students who received bilingual/ESL services. Cross-sectional findings indicate that the largest number of dropouts comes from this group, and those remaining finish school near the 12th percentile (25th NCE) on the standardized reading test (from our 1996-2001 analyses). (See Figure 2).
- Proposition 227 in California (one year immersion in English classes, followed by submersion in the mainstream) has resulted in EVEN LESS gap closure than English as a Second Language (ESL) pullout, the next lowest achieving program. There is no significant evidence of achievement gap closure by ELLs, especially in the secondary grades, and there is some evidence that the achievement gap is widening since Proposition 227 was initiated (from our analyses of California Department of Education statewide test scores, 1998-2001. For confirming analyses, see also Thompson, DiCerbo, Mahoney & MacSwan, 2002.)
- Typical end-of-school achievement for graduates of ESL pullout provided for 2-3 years is the 11th percentile (24th NCE)—highest is the 18th percentile (31st NCE); and their dropout rate is highest among the programs (from our 1991-1996 analyses).
- Graduates of ESL content or sheltered instruction provided for 2-3 years reach the 22nd percentile (34th NCE) by the end of their high school years—highest is the 32nd percentile (40th NCE) (from our 1991-1996 and 1996-2001 analyses).
- Graduates of transitional bilingual education (TBE) in a segregated classroom for 2-3 years reach the 24th percentile (35th NCE) by the end of their high school years (from our 1991-1996 analyses).
- Graduates of TBE for 3-4 years, integrated with native-English speakers for a half-day of instruction in English, reach the 32nd percentile (40th NCE) by the end of high school (from our 1991-1996 analyses).
- Graduates of 90/10 TBE (in which for Grades PK-2, 90 percent of the instruction is in the minority language, gradually increasing majority language [English] instruction until by Grade 5, all instruction is in English for the remainder of schooling) reach the 45th percentile (47th NCE) by the end of high school (from our 1996-2001 analyses). (See Figures 2 and 4).
- Enrichment 90/10 and 50/50 one-way and two-way developmental bilingual education (DBE) programs (also called dual language or bilingual immersion)\* are the only programs we have found to date that assist students to fully reach the 50th percentile in both L1 and L2 in all subjects and to maintain that level of high achievement, or reach even higher levels (highest we've seen is 83rd percentile—70th NCE), through the end of their high school years. The fewest dropouts come from these programs. These enrichment bilingual programs work well because they are sustained long enough (at least 6-7 years) for students to reach grade level achievement in English.
- 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 percentile that they reach during their school years. Ideally, instructional gains are best accomplished in an enrichment, not a remedial, program (from our 1991-1996 and 1996-2001 analyses).



## Reforming Education Policy Research Evidence

by Wayne P. Thomas & Virginia P. Collier,  
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*This article provides an overview of our research findings to date from our studies in U.S. public schools in 23 school districts in 15 states from 1985 to the present, including our recently completed National Study of School Effectiveness for Language Minority Students' Long-term Academic Achievement. This study was federally funded by the Office of*

**E**nglish Learners (EL) are the fastest growing demographic group in U.S. schools in all regions of the country, and are predicted to be 40 percent of the U.S. school population by the 2030s (Berliner & Biddle, 1995). But, throughout the country, we have not yet seen education policy makers address these students' needs in a comprehensive and meaningful way. Our analyses of English Learners' achievement in all regions of the U.S. have found that the achievement gap is very large between average native-English speakers and former English Learners placed for at least five years in the education mainstream. By the end of high school, on standardized achievement tests in English, while the norm group of native-English speakers achieves on average at the 50th percentile, former English learners achieve on average at the 11th percentile on these same tests (Thomas & Collier, 1998, 2002). Furthermore, many students whose first language was not English are unable to complete high school, including 46 percent of foreign-born Hispanic students (Berliner & Biddle, 1995).

Clearly this is a major national issue that must be addressed, state-by-state, since the state is the ultimate authority on education policy according to U.S. constitutional law. In particular, it is urgent that the state of California face and address the needs of its English Learners in schools, because the demographic future for the U.S. is that of California now. The following outlines some of our major research findings over the past 15 years, many of which have strong implications for school policies for these students.



## ies for English Learners: rom U.S. Schools

*Educational Research and Improvement of the U.S. Department of Education, 1996-2001, as one of the studies of the Center for Research on Education, Diversity and Excellence (CREDE). (See websites [www.nche.gwu.edu](http://www.nche.gwu.edu) and [www.crede.uesc.edu](http://www.crede.uesc.edu) for February, 1998 and May, 2002 reports of our research findings.)*

Our research is focused on working at the school district level, to assist local policy makers to analyze their own locally collected data. As principal investigators, we establish a collaborative research agreement with each school district that chooses to participate, to follow every language minority student who enters the school district for every year of his/her attendance in that school district, by each program type attended including the mainstream, and by cohorts of similar student background (e.g. socioeconomic status, first language [L1] and second language [L2] proficiency upon entry, and amount of L1/L2 grade-level prior schooling). Measures of student achievement are those administered by the school district, including standardized test scores. We report generalizations across school districts based on group performance on standardized measures, as expressed in normal curve equivalents (NCEs), which are equal-interval percentiles. The school districts participating in the study are promised anonymity until they choose to self-identify. Four sites to date have self-identified, and these districts and their student achievement outcomes are described in the CREDE report (Thomas & Collier, 2002).

*English Learners submersed in the English mainstream because their parents refused all bilingual and ESL services show large decreases in reading and math achievement by Grade 5, when compared to students who received bilingual/ESL services.*

## LONGITUDINAL RESEARCH FINDINGS: (CONTINUED)

• *Socioeconomic status influences only 5 percent of achievement with strong programs, but as much as 18 percent for weaker programs. Therefore, effective and sustained programs can almost completely overcome the negative effects of low socioeconomic status (from our 1996-2001 analyses).*

• *The strongest predictor of L2 student achievement is amount of formal L1 schooling. The more L1 grade-level schooling, the higher L2 achievement (from our 1991-1996 and 1996-2001 analyses).*

• *Bilingually schooled students outperform comparable monolingually schooled students in academic achievement in all subjects, after 4-7 years of dual language schooling. (For an example, see Figure 3).*

• *When English Learners initially exit into the English mainstream, those schooled all in English 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. (See Figure 4.)*

• *Students who receive at least 4-5 years of grade-level L1 schooling in home country before they emigrate to the U.S. typically reach the 34th NCE (23rd percentile) by 11th grade when schooled all in English in the U.S. in a quality ESL content/sheltered 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, a very difficult task to accomplish within the remaining years of K-12 schooling. (See Figure 5, for an example of achievement levels with all-English schooling in the U.S.)*

• *Students who receive at least 5-6 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.*

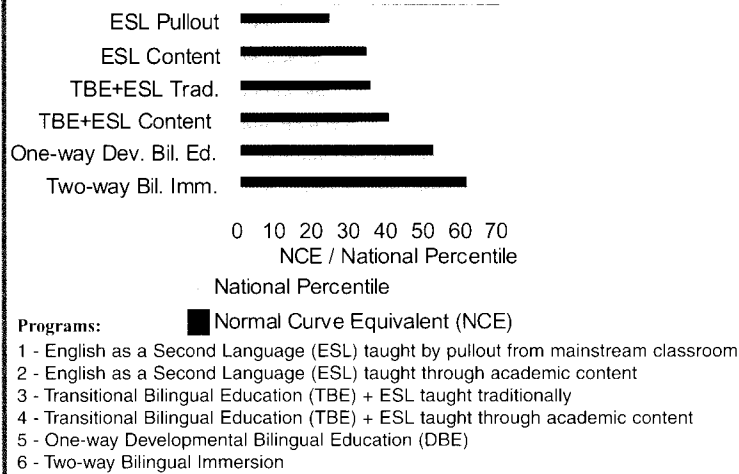
• *Bilingual/ESL programs must be effective (at least 3-4 NCE gains per year—more than mainstream students are gaining), well implemented, not segregated, and sustained long enough (5-7 years) for the typical 25-30 NCE achievement gap between English Learners and native-English speakers to be closed. Even the most effective programs can only close half of the achievement gap in 2-3 years, the typical length of remedial programs for English Learners (from our 1991-1996 and 1996-2001 analyses).*

• *Native-Spanish speakers in 90-10 TBE, DBE, and two-way DBE classes in Spanish Total Reading achievement findings, on the Aprenda 2 nationally standardized test:*

*reached the 56th to 65th NCE (61st to 76th percentile) for Grades 1-8, remaining significantly above grade level in Spanish while reaching grade-level achievement in English. Native-Spanish speakers in the 90-10 two-way DBE (bilingual immersion) classes reached the highest achievement levels of these three program types, in both Spanish and English.*

**Figure 1 Longitudinal Analyses**

**Former English Learners' Grade 11 Reading Achievement by Elementary School Program**

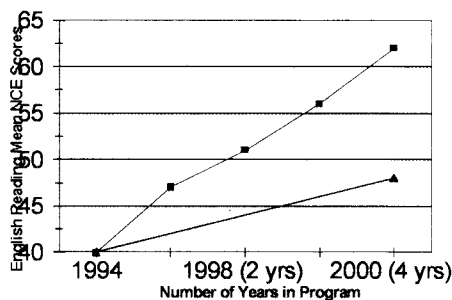


Our school districts use the results of our data analyses for more effective decision-making that is data-driven. We have collected data from urban, suburban, and rural school districts in all regions of the U.S. The total number of language minority student records collected to date is over 2 million, from school years 1982-2001, with over 100 primary languages represented in the student samples, Spanish speakers being the largest language group. (One student record includes all the school district records for one student collected during one school year, such as student background characteristics, the grade level and school program(s) that student attended, and academic achievement measures administered to that student during the school year.) Our program effectiveness findings to date continue to confirm our findings from previous studies, and we have added some new program types analyzed in the 1996-2001 research.

Our first research findings presented here focus on 11th grade results in English on nationally standardized tests, on the Total Reading subtest (measuring academic problem solving across the curriculum—math, science, social studies, literature), for students who entered the U.S. school district with no proficiency in English in Grades K-1. These students received one of six programs for English Learners during their elementary school years. (See Figure 1 for an overview of our findings on the long-term achievement outcomes for students in each program type.)

**Figure 3 Quasi-longitudinal Analyses**

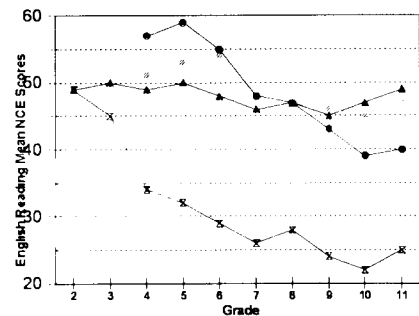
**N. Maine LEP Achievement by Program on the CTBS/Terra Nova English Reading**



In summary, we have found that 1-3 years of special support for English Learners, the typical time frame established by most policy makers, is not at all adequate to provide a "meaningful education" as required by Lau v. Nichols (1974). In fact, even the best programs for English Learners close only about half of the achievement gap in three years, and graduates of these short-term programs demonstrate no further gap closure after joining mainstream classes. Closing the achievement gap is much more than just learning English—it requires mastering the entire curriculum and demonstrating that subject knowledge, grade after grade, through English. With each succeeding grade level the curriculum becomes more cognitively complex and the amount of subject mastery expands exponentially. Even after English Learners enter the mainstream, we have found that it takes at least six more years for them to gain more than the native-English speaker gains year after year, to eventually close the large achievement gap. It is

**Figure 2 Cross-sectional Analyses**

**Houston ISD Achievement by Program on the 1999 Stanford 9 in English**



Mainstream Native-English speakers	N = 103,887
Former Transitional Bilingual Education students	N = 3,333
Former ESL Content students	N = 3,655
Former LEP students whose parents refused Bilingual/ESL services	N = 1,599

for this reason that enrichment bilingual classes in the mainstream work best. These classes are also the most cost-effective, because existing teacher-student ratios can be maintained.

An enrichment bilingual ESL program must meet students' developmental needs: linguistic (L1-L2), academic, cognitive, emotional, social, 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 L1 and L2 used in separate instructional contexts with no translation: meaningful, 'real world' problem-solving; all students working together; media-rich learning (video, computers, print); challenging thematic units that get and hold students' interest; and using students' bilingual-bicultural knowledge to bridge to new knowledge across the curriculum. This support must be provided for at least six years or more, until students have reached grade-level achievement in English, while maintaining grade-level achievement in primary language.

**Schools need to create a natural learning environment in school, with lots of natural, rich oral and written language.**

*\*Definitions: one-way refers to one language group receiving schooling through two languages; two-way refers to two language groups receiving integrated schooling through two languages. In 50-50 bilingual programs, half of the instructional year is taught in each language; whereas in 90-10 bilingual programs, in the early grades 90 percent of the instruction is in the minority language, gradually moving towards 50-50 by Grade 5.) (from our 1991-1996 and 1996-2001 analyses.*

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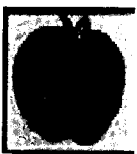
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