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A National Study of School Effectiveness for Language Minority Students' Long-Term Academic Achievement

Center for Research on Education, Diversity & Excellence

Evaluative Research of Language Support Programs

There exists a pressing need for research that evaluates language support programs in order to understand which ones successfully promote the long-term academic achievement of English language learners (ELLs). A number of factors make this need a priority. Roughly 4.6 million ELLs were served by the U.S. K-12 educational system in 2000-2001 (Kindler, 2002). By the 2030s, language minority students are expected to comprise 40% of the school-aged population in the United States (Thomas & Collier, 2002). In addition, federal laws increasingly encourage decision-making guided by "scientifically based" research. The No Child Left Behind Act (2001) and the Education Sciences Reform Act (2002) make such calls. U.S. society at large as well as today's educational policy makers and practitioners have a profound interest in the findings of scientifically based research that can recommend programs of effective instruction for ELLs.

Study Overview

From 1996-2001, CREDE researchers Wayne Thomas and Virginia Collier conducted the "National Study of School Effectiveness for Language Minority Students' Long-Term Academic Achievement." Built on 14 years of related research, this study documents the academic achievement of ELLs over the long-term (4-12 years) and across content areas. It offers a much-needed overview of programmatic successes in the education of ELLs for policy makers.

The study collected data from five school districts throughout the United States. They included an inner-city urban district in the northwest, a large urban district in south central U.S., a mid-sized urban district in the southeast, and two rural districts in the northeast. Researchers collected records of individual ELL students for a minimum of 4 years of their education and analyzed achievement trends of those students. Records examined included those of students who remained in longer-term language support programs (i.e., 5-6 years), those in shorter-term programs (i.e., 1-3 years), and those who had exited or never entered such programs (i.e., receiving some years of their instruction in mainstream English medium classrooms).

These data have been analyzed in order to understand how effective varying programs, implemented with theoretical integrity and established logistical support, can be in preparing students for success *throughout the duration of their academic experiences*.

Programs Compared

The study evaluated achievement data from all fully implemented language support programs offered by the districts' bilingual or ESL department. These included four

distinct theoretical program designs. **Two-Way Bilingual Immersion** programs promote academic achievement, bilingualism, and biliteracy for ELLs and native English speakers. They typically last for at least 5 or 6 years. **One-Way Developmental Bilingual Education** programs share the goals and duration of Two-Way Bilingual Immersion programs, but offer instruction only to language minority students of one language background (including ELLs). **Transitional Bilingual Education** programs offer classes presented in the ELLs' native language for at least 2 or 3 years after which time ELLs receive all-English instruction. **English as a second language taught through academic content** programs for ELLs integrate the teaching of English with content area instruction. For more detailed descriptions of language support programs, see Genesee (1999).

The bilingual programs were further distinguished by the amount of instructional time spent using English and the non-English language as mediums of instruction. **90/10** programs are those in which students receive 90% of their instruction in a language other than English and 10% of their instruction in English in the early years of the program. **50/50** programs are those in which the amount of instructional time in English is equal to instructional time in the non-English language throughout all years of the program.

Academic programming for ELLs who had either exited language support programs or who had opted out of language support programs was categorized as **English mainstream**.

Study Design

Researchers compiled students' records from each of the five participating districts. A student record consisted of the information formally collected by the district regarding each identified student for one school year such as grade level, programs attended, and measures of academic achievement. Researchers used only records of students who 1) entered kindergarten or first grade with little to no English proficiency and 2) participated in programs which were being implemented by district personnel in accordance with the theoretical design features put forward by experts in the field. The findings of the study reflect analysis of 210,054 student records.

Student records were grouped into longitudinal cohorts of grades for which students attended school in the district. For example, all ELLs of similar socioeconomic and educational background who attended school in a district from kindergarten through Grade 4 constituted one longitudinal cohort, all students of similar backgrounds who attended Grades K to 5 constituted another, up through a Grades K-12 cohort. In the final stages of the study, researchers

compared achievement results of all cohort groups based on program of instruction. This allowed them to draw conclusions about the academic success students had in the varying programs.

Data Analysis

Each district used different tools of assessment to measure achievement. In order to compare results from these assessments across districts, researchers relied on analysis of the “achievement gap”—the quantified difference in academic achievement between two groups of students. To document each district’s gap, researchers evaluated the academic progress of ELLs and non-ELLs within the district over 5 years. Researchers found there to be a recurring, significant gap between the groups.

Because non-ELLs make academic progress each year, reaching achievement parity is not a fixed goal. Thus, closing the achievement gap for the ELL group means “shooting at a moving target”—making more than the average yearly academic progress of the non-ELL group for a successive number of years. Once the gap was documented, researchers examined the ability of each language support program to close that gap over the long-term and across subject area.

Major Findings

The study findings are conclusive about academic achievement in a variety of learning areas. To gather the data for the findings, researchers used reading, language arts, and math subtests of the standardized tests (Terra Nova, Stanford 9, ITBS, CTBS, SABE, and Aprenda 2) given to students by the districts. In addition, researchers examined variables, such as socioeconomic status, number of years of primary language schooling, and gender differences for influence on academic achievement. Study findings include:

- ◆ 90/10 and 50/50 Two-Way Bilingual Immersion and One-Way Developmental Bilingual Education programs are the only programs found to date that assist students to fully reach the 50th percentile (scoring above 50% of the other test takers) in both their native language and English in all subject areas and to maintain that level of high achievement, or reach even higher levels through the end of their schooling. The fewest dropouts came from these programs.
- ◆ ELLs who attended only English mainstream programs because their parents refused language support services showed large decreases in reading and math achievement by Grade 5 when compared to students who participated in language support programs. The largest number of dropouts came from this group.
- ◆ When ELLs initially exit a language support program into the English mainstream, those schooled in all-English medium programs (ESL) outperform those schooled in the bilingual programs when tested in English. The students schooled in bilingual programs, however, reach the same levels of achievement as those schooled all in English by the middle school years. Further, during the high school years, the students schooled in bilingual programs outperform the students schooled in all English.

- ◆ The amount of formal primary language schooling that a student has received is the strongest predictor of second language student achievement. That is, the greater the number of years of primary language, grade-level schooling a student has received, the higher his/her English achievement is shown to be.

Policy Recommendations

The research findings offer a number of recommendations to policy makers including the following:

- ◆ Parents who choose not to enroll their children in language support programs should be informed that the long-term academic achievement of their children will probably be much lower as a result. They should be strongly counseled against refusing language support services if their child is eligible for them. The research findings of this study indicate that language support services, as required by *Lau v. Nichols* (1974), raise students’ achievement levels by significant amounts.
- ◆ In order to close the average achievement gap between ELLs and native English speakers, language support programs must be well implemented, not segregated, sustained for 5–6 years, and demonstrate achievement gains of more than the average yearly progress of the non-ELL group each year until the gap is closed. Even the most effective language support programs can only close *half* of the achievement gap in 2–3 years.

Conclusion

The findings of this study are timely in light of the national focus on scientific research especially for addressing effective education for ELLs. The study goals, research design, and analysis are clearly documented and the conclusions can inform decision-making and policy at federal, state, and district levels. Although this brief highlights only a small portion of the findings and recommendations from the study, the full report is available to download online at http://www.crede.ucsc.edu/research/llaa/1.1_final.html. In February 2003, the report will be available to order from CREDE at <http://www.cal.org/store/>.

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