

English Learners in North Carolina Dual Language Programs: Year 3 of this Study: School Year 2009-2010

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Executive Summary Prepared for the North Carolina Department of Public Instruction

Background	Like other states, North Carolina has experienced a tremendous increase in students whose first language is not English in recent years. Graduates of English-as-a-Second-Language (ESL) programs still exhibit substantial achievement gaps compared to students whose home language is English. As a result, NCDPI has contracted with Wayne P. Thomas and Virginia P. Collier of George Mason University, nationally recognized for their studies of English language learners, to research the effectiveness of dual language programs in addressing these gaps. This report presents the third year cross-sectional results of a longitudinal study to evaluate education programs for English learners in North Carolina Public Schools.
Dual Language Education Defined	The programs studied in this report are two-way dual language programs: programs in which English language learners and native English speakers are educated in the classroom together in both English and another language (the home language of the English learners). The curriculum (<i>North Carolina Standard Course of Study</i>) is presented in English part of the time and a second language at least half the time (Spanish, Chinese, French, German, or Japanese). All state-level tests are administered in English.
Data Sample	<p>The data sample analyzed consists of all available 2009-2010 (School Year 2010) information on students in the school districts operating at least one dual language program for at least four years:</p> <ul style="list-style-type: none"> (1) Chapel Hill-Carrboro City: Carrboro Elementary (PK-5), Glenwood Elementary (PK-5), and McDougle Middle School (6-8) (2) Charlotte-Mecklenburg: Collinswood Language Academy (K-8), Oaklawn Language Academy (K-8), and Smith (now Waddell) Language Academy (K-8) (3) Chatham County: Siler City Elementary (K-5) (4) Durham County: Southwest Elementary (PK-5) (5) Greene County: Snow Hill Primary (K-2), West Greene Elementary (3-5), Greene County Middle School (6-8) (6) Winston-Salem/Forsyth County: Ashley Elementary (K-5) <p>Charlotte-Mecklenburg schools have whole school dual language programs. The other district programs include at least one dual language class per grade. Most programs are Spanish-English and have close to an equal number of non-English language and native English speakers at each grade level.</p> <p>Students who attended school at least 90 days and took an EOG test were included in the study. Both dual language and non-dual language students (in schools with dual language and schools without) are included in the sample for comparison purposes.</p>

<p>Analysis</p>	<p>Students are divided into three mutually exclusive groups (Thomas-Collier disaggregation groups) with subcategories for analysis:</p> <ol style="list-style-type: none"> (1) English learners (LEP students) (N=12,179) (2) Language minority students who are not English learners (N=7,097) (3) Non-language-minority native English speakers <ol style="list-style-type: none"> a. African Americans (N=37,435) b. Whites (N=36,682) c. Multi-ethnic (N=4,337) <p>In addition, separate analyses of two groups of interest from the total sample are:</p> <ol style="list-style-type: none"> (1) Students of low socioeconomic status (as measured by participation in free and reduced lunch services) (2) Students with exceptionalities (who qualify for special education services) <p>Mean Reading and Math scores are analyzed separately by grade. Statistical significance (determined using confidence intervals) and practical significance (determined by measures of effect size) are reported.</p>
<p>Significant Findings</p>	<p>The distributions of Reading and Math scores in the six-district study sample are approximately the same as statewide figures for each grade; therefore, the conclusions from the study sample are likely to represent the state. Findings in favor of dual language programs are consistently both statistically and practically significant.</p> <ul style="list-style-type: none"> • Overall, Reading and Math scores of students in two-way dual language education are higher for all dual language students, regardless of ethnicity, socioeconomic, LEP, or special education status. In most cases, by the middle school years, two-way dual language students, regardless of subgroup, are scoring as high in Reading and Math as non-DL students in the next highest grade who are typically one year older. In some cases, the DL students are scoring as much as two years higher than their non-DL peers. • Both English learners (LEP students) and African American native English speakers initially show very large achievement gaps when compared to White native English speakers, regardless of subgroup. Achievement gaps are also present among students of low-socioeconomic and special education status. However, when these groups participate in dual language programs, their achievement gaps are smaller than the gaps of the same groups who are not in dual language classes. • Overall, low-socioeconomic-status (SES) students score much lower in Reading and Math than students who are not low-SES. Many African American students and LEP students are low-SES. Low SES may be a primary factor affecting differences in Reading and Math achievement for these student groups. However, based on three years of analyses (school years 2008, 2009, and 2010), we find that two-way dual language programs significantly address the achievement gap for low-SES students. • Students with exceptionalities (special education students) typically score significantly lower in Reading and Math than students without exceptionalities. But there is substantial evidence in the findings from analyses of school years 2009 and 2010 that special education students in two-way dual language classes who took the End-of-Grade tests outscore special education students not in dual language classes.

Researchers' Conclusions	<p>Findings strongly suggest that there are qualities to North Carolina's two-way dual language programs that confer greater educational gains in Reading and Math compared to non-dual language education. After three years of studies, we conclude that two-way dual language education is an effective way to improve the Reading and Math scores of <u>all</u> North Carolina students.</p> <p>There are higher percentages of Hispanics and Whites participating in North Carolina's two-way dual language programs than African Americans. Given the large number of African Americans in North Carolina's student population, the lower Reading and Math scores of African American students statewide, their under-representation in two-way dual language programs, and the advantages that two-way dual language education provides African American students, we recommend efforts to increase African American enrollment in dual language programs.</p> <p>Low-socioeconomic status may be a driving factor in lower achievement among English learners and African American students. Given that low-socioeconomic-status (SES) students in dual language programs score significantly higher in Reading and Math than low-SES students not in dual language programs, two-way dual language programs can address the achievement gap for many English learners and African American students.</p> <p>In Reading, low-SES African American students attending dual language classes are scoring at least one grade higher than their low-SES African American peers not in dual language as early as 4th grade. Furthermore, in Math, low-SES African American dual language students are more than <u>two grades ahead</u> of low-SES African American non-dual language students as early as 5th grade. <u>These findings indicate that two-way dual language programs are a school reform model for addressing the achievement gap for formerly "at risk" groups.</u></p> <p>Low-SES students are 41% of the total enrollment in dual language programs in this Year 3 study, illustrating that families of low income are well represented in this database. The fact that dual language programs are successful in raising the scores of this "at risk" group lends even greater significance to the higher achievement of students attending dual language programs.</p> <p>In both Years 2 and 3 of these studies, exceptional (special education) students in two-way dual language classes have outscored exceptional students not in dual language classes. Exceptional students deemed ready to take the EOG tests may benefit from placement in dual language classrooms, possibly because of the cognitive stimulation afforded by mastering the curriculum in more than one language and by acquiring a second language in addition to English. This intriguing finding deserves further investigation in future analyses with larger samples of students with exceptionalities in dual language programs.</p> <p>In summary, after analyzing three separate years of data, we find that dual language classes increase the Reading and Math achievement of <u>all</u> students regardless of subgroup, and are a substantially effective means of addressing North Carolina's large achievement gaps for limited-English-proficient students, non-language-minority native-English-speaking African American students, students of low-socioeconomic status, and special education students. Longitudinal studies of student cohorts over multiple school years, beginning with the addition of school year 2011 and 2012 data, will expand on these findings in the next report.</p>
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