

The Impact of Educational First Steps on Student Success in DISD

An analysis using DISD data to assess the impact of EFS on students' success using measures of academic achievement and school progress

October 2008

Kristin A. Kuhne, Ph.D.
Research Associate, Texas Schools Project

Richard K. Scotch, Ph.D.
Professor of Sociology, Public Policy and Political Economy

Dan O'Brien, Ph.D.
Director, Texas Schools Project

University of Texas, Dallas

This paper is a working draft; a revised version of the paper will be released as the first annual Preschool Longitudinal Project Report in late October 2008. Correspondence concerning this paper and the Preschool Longitudinal Project may be directed to Dr. Richard Scotch, School of Economic, Political, and Policy Sciences, University of Texas at Dallas, 800 W. Campbell Road, Richardson, TX 75080; 972-883-2922, richard.scotch@utdallas.edu.

Table of Contents

| | |
|---|-----------|
| Acknowledgement | 3 |
| Introduction | 3 |
| Research Partnership | 4 |
| Study Objectives and Methodology | 4 |
| Descriptive Statistics | 5 |
| EFS and DISD Students | 5 |
| EFS Affiliates | 6 |
| Analysis | 7 |
| Math and Reading Scores | 8 |
| <i>The Effect of EFS</i> | 8 |
| <i>The Effect of EFS Step Level</i> | 9 |
| Retained in Grade, LEP and Special Education..... | 11 |
| <i>The Effect of EFS</i> | 12 |
| <i>The Effect of EFS Step Level</i> | 12 |
| Conclusions | 13 |
| Appendix A | 15 |
| Appendix B | 26 |

Acknowledgement

The authors would like to acknowledge the critical assistance of the staff of Educational First Steps (EFS) in the design and implementation of this study, in particular Merriott Terry, Chief Executive Officer, and Shannon Hendricks, Program Director. Considerable assistance with data collection was provided by EFS education specialists, by the staff of the early childhood education centers mentioned in this report, by the Dallas ISD Research and Evaluation Office, and by UT Dallas research assistant Laura Daghish. Administrative support was provided by Janie Jury of the UT Dallas Texas Schools Project. We would also like to express our thanks for the support provided by the EFS Board of Directors, and in particular to Mr. David Munson, whose passionate commitment to early childhood education for low income families in North Texas has been expressed in many significant ways.

Introduction

Children from low-income households and who grow up in low-income neighborhoods face a variety of obstacles as they grow to adulthood. One of the most critical factors in their development is whether they are successful in school, preparing them for college, for meaningful employment, and for effective citizenship in our knowledge-based economy and complex society. Children in middle class, two parent households whose parents have higher levels of education typically gain needed skills at home during their early years. However, the parents of low income and minority children may find it difficult to provide them with sufficient help in achieving basic literacy and numeracy, and these children may enter school with disadvantages that may become exacerbated and multiplied in the early grades.

Social policy research of the past four decades suggests that children who arrive at school already having mastered basic academic and social skills are far more likely to progress, while those who lack such skills often find it difficult to keep up with their peers are at risk for poor school performance, an inability to pass state-mandated standardized tests, and dropping out. There is general consensus among experts that high quality early childhood education (ECE) is an excellent way to prepare at risk children for academic success. One notable caveat in the professional literature is that ECE programs that are not of high quality are not associated with subsequent academic success for their graduates.

Research Partnership

In Dallas, one of the most significant supports for high quality early childhood education has been Educational First Steps (EFS). Educational First Steps (EFS) is a nonprofit organization that has been helping preschool age children from low-income families in the Dallas area for nearly two decades by assisting affiliated community-based child care centers through professional training, enrichment programs, targeted financial assistance and promotion of parental involvement through literacy activities and parenting classes. EFS-affiliated centers are distributed across four “steps” that represent progression to full accreditation. In 2008, EFS was affiliated with over 60 ECE centers in low-income neighborhoods in Dallas and several surrounding cities.

In late 2006, EFS invited researchers at the University of Texas at Dallas (UTD) School of Economic, Political, and Policy Sciences to assist them in a long-term study of the impact of its program. UTD is home to the Texas Schools Project (TSP), a research center designated by the Texas Education Agency as a data depository for administrative records from school districts across the State of Texas. School data are maintained on a secure server that guarantees the confidentiality of student information, but which permits the matching of student data for approved research projects. UTD and EFS had previously collaborated on a 2003 study that, with limited data, had shown that students from EFS affiliates had done better than their peers in Dallas ISD elementary schools. For the current study, TSP is utilizing administrative records through the 2006-2007 academic year that were provided directly by the Dallas Independent School District through an ongoing research agreement with TSP. We hope to continue our collaboration in coming years, to track students from all EFS affiliates in Dallas as they progress through public school, and to extend the study to students in area charter schools and other independent school districts.

Study Objectives and Methodology

This study investigates the impact of participation in EFS-affiliated early childhood education centers on student success in the early elementary school grades. Working with researchers for UTD, EFS and its affiliates identified students who had participated prior to 2008 in EFS-affiliated ECE programs. These efforts yielded 5,471 student records that were matched with administrative and academic records provided to UTD by the Dallas

Independent School District (DISD). The study uses test scores and other measures of academic proficiency, taken from DISD data, to compare EFS participants to their DISD peers.

Data was not available for all student participants in EFS programs, or for the preschool experience of the DISD comparison group. A number of EFS centers could not provide historical data on enrolled students, who could therefore not be included in the study. In the future, we expect to gather a more comprehensive census of students at EFS affiliated centers, generating a far larger study group.

For the purposes of this study, EFS students are defined as students for whom EFS data was provided, who also enrolled in DISD. DISD students are defined as all other students attending DISD.

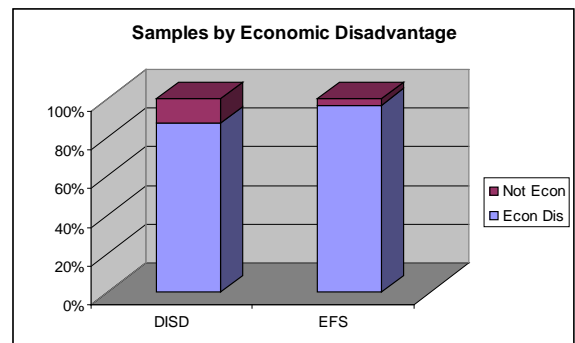
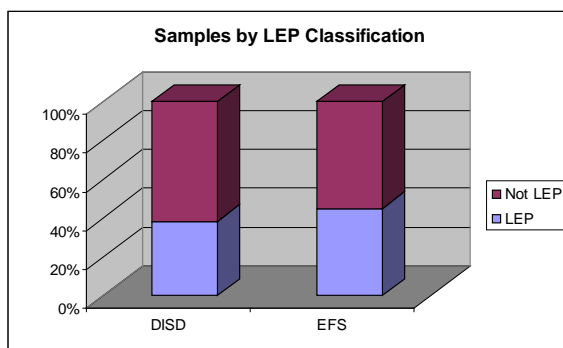
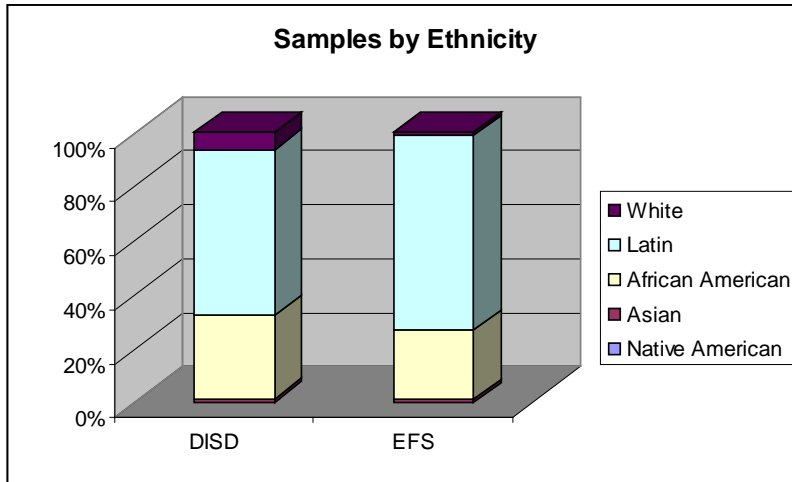
Descriptive Statistics

EFS and DISD Students

More than 1,600 EFS affiliate students were matched with DISD records from 2003 – 2007, using last name, first name, and birth date to uniquely identify each student. This reflects a match rate of 29% to the initial 5,471 EFS student records gathered. Many students identified as having attended EFS affiliates had not yet entered elementary school, and some were enrolled in other ISDs or charter schools. This group of EFS students was compared to over 183,000 DISD students. The table below describes the socioeconomic characteristics of the two samples.

Table 1. Sample Characteristics for DISD & EFS Students

| | DISD | | EFS | |
|----------------------------|---------|-----|-------|-----|
| | # | % | # | % |
| Total Students | 183,756 | | 1,606 | |
| Male | 92,539 | 50% | 786 | 49% |
| Native American | 530 | 0% | - | 0% |
| Asian | 1,902 | 1% | 21 | 1% |
| African American | 56,979 | 31% | 411 | 26% |
| Latin | 112,912 | 61% | 1,155 | 72% |
| White | 11,433 | 6% | 19 | 1% |
| LEP | 70,021 | 38% | 721 | 45% |
| Economically disadvantaged | 160,522 | 87% | 1,551 | 97% |
| Retained in grade | 12,708 | 7% | 106 | 7% |
| Special Education | 11,750 | 6% | 117 | 7% |



As the table and charts above illustrate, DISD serves a diverse student population, as does EFS. However, EFS students would be considered even more educationally disadvantaged than their DISD peers due to a higher proportion of students who are classified as limited English proficiency (45% vs. 38%) and economically disadvantaged (either free or reduced price lunch; 97% vs. 87%).

EFS Affiliates

The matched population of EFS students is drawn from 20 centers representing 30% of the EFS centers in Dallas County. Of these 20 centers, 15% were Step 1 affiliates, 60% were Step 2, 5% were Step 3 and 20% were considered 'Community Partners' or Step 4 affiliates. These centers have been affiliated for an average of 5 years. A full listing of the centers whose students matched with DISD is provided in the Appendix A.

Table 2. EFS Students by Grade & Step Level

| Grade | Step 1 & 2 | | Step 3 & 4 | | Total |
|-------|------------|-----|------------|-----|-------|
| KG | 206 | 30% | 482 | 70% | 688 |
| 1 | 67 | 27% | 183 | 73% | 250 |
| 2 | 38 | 18% | 174 | 82% | 212 |
| 3 | 25 | 18% | 113 | 82% | 138 |
| 4 | 18 | 13% | 123 | 87% | 141 |
| 5 | 9 | 9% | 88 | 91% | 97 |
| 6 | 8 | 16% | 43 | 84% | 51 |
| 7 | 4 | 21% | 15 | 79% | 19 |
| 8 | 4 | 40% | 6 | 60% | 10 |
| Total | 379 | 24% | 1,227 | 76% | 1,606 |

The majority of EFS students participated at Step 3 or Step 4 centers (76%) that have achieved accreditation by one of the two established national bodies in early childhood education, the National Association for the Education of Young Children or the National Association of Child Care Professionals. While over 70% of the EFS students participated at Mi Escuelita (38%) or Avance (33%), this is an artifact of the data collection process due to the inclusion of historical data. The sample will encompass more affiliates in future analyses as data on students from a more comprehensive set of EFS centers becomes available and/or more students leave ECE Centers to enter elementary school.

Analysis

Statistical analysis using inferential statistical techniques was performed to determine the effect of EFS participation on student success as measured by academic achievement and school progress. Academic achievement was measured using test scores from district and state assessments in reading and math. School progress was assessed using on-time grade-to-grade transition and referrals to special education or classification as limited English proficient (LEP). EFS students were compared to all DISD students for a given grade level, as well as DISD students at the same campus.

The initial analyses compared EFS students to all other DISD students on measures of student success. EFS students came to school ready to learn, earning higher scores on math and reading tests in the early grades.

Additional analyses were performed to determine the effect of center accreditation on EFS participants. EFS students who attended accredited affiliates, those at Step 3 or 4, are more successful than their DISD peers and participants at Step 1 or 2 centers. Compared to DISD students, EFS students from Step 3 and 4 centers have higher scores on reading and math assessments in early grades. EFS students at these higher level centers are also less likely to be retained in grade. Indeed, the positive effect for EFS found in the initial analyses can be attributed to attending a accredited ECE center. The results of each analysis are presented next.

Math and Reading Scores

The Effect of EFS

Math and reading scores were standardized for each grade level and year to allow comparisons across time. Scores were pooled across years by grade level. The number of scores exceeds the number of students because each student has multiple test scores during his or her enrollment in DISD.

The ordinary least squares regression technique was used to predict the change in standardized test scores for EFS participants, holding all else constant. DISD administers the Iowa Test of Basic Skills (ITBS) or Logramos in grades K – 2 and the Texas Assessment of Knowledge and Skills (TAKS) for subsequent grades. The estimated effect on standardized test score is found on the first line. The t-statistic, an index of the reliability of the relationship between the two variables, is listed in parentheses on the second line. A t-statistic of 1.96 or greater indicates that the probability of obtaining the result by random chance is <5%. Detailed results for each regression are included in Appendix A.

Table 3. Estimated Effect for Standardized Math & Reading Scores by EFS Participation

| | Kindergarten | | Grade 1 | | Grade 2 | | Grade 3 | |
|-------------------|--------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|
| | <u>Math</u> | <u>Reading</u> | <u>Math</u> | <u>Reading</u> | <u>Math</u> | <u>Reading</u> | <u>Math</u> | <u>Reading</u> |
| EFS | 0.079 | 0.03 | 0.09 | 0.114 | 0.094 | 0.085 | 0.035 | -0.014 |
| | (1.49) | (0.73) | (2.66)** | (3.51)** | (2.77)** | (2.61)** | (0.98) | (0.40) |
| Percentile points | | | 1.8 | 2.3 | 1.9 | 1.7 | | |

** significant at 5% level; ** at 1% level*

The results indicate that EFS students score higher than all other DISD students, in both reading and math for first and second grade. Converting the point estimates by the standard deviation, allows them to be more readily understood as percentile points. In first grade, EFS students score 1.8 percentile points higher than all other DISD students in math and 2.3 percentile points higher in reading. In second grade, EFS students score 1.9 percentile points higher in math and 1.7 percentile points higher in reading. The effect of EFS was not significantly different than all other DISD students beyond these grade levels. This is not an uncommon finding for ECE studies, like this one, due to attrition and self-selection of the sample. We expect to be able to study the longer term effects of attending an EFS center in future phases of the study, when far more extensive data will be available

The effect of EFS is positive in kindergarten, but not significantly different from their peers. This finding may be attributed to the DISD test data available for this grade level. DISD administers a Spanish language assessment, Logramos, in the early grades (K – 2) in addition to the ITBS for English speaking students. Scores for both language versions of the test were not available in all years for the kindergarten grade level. The scores for the English version of the reading test were only available for 2003 – 2005 and for math in 2006. The analysis for the kindergarten grade level relies exclusively on test scores for the Spanish version of the test in all other years. The chart below presents the availability of test data by year.

Table 4. Availability of Scores by Grade, Test Type, Year and Subject

| Grade & Test Type | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|-------------------|------|---------|------|---------|------|---------|------|---------|------|---------|
| | Math | Reading | Math | Reading | Math | Reading | Math | Reading | Math | Reading |
| KG | | | | | | | | | | |
| ITBS | 0 | X | 0 | X | 0 | X | X | 0 | 0 | 0 |
| Logramos | X | X | X | X | X | X | X | X | X | X |
| Grade: 1 & 2 | | | | | | | | | | |
| ITBS | X | X | X | X | X | X | X | X | X | X |
| Logramos | X | X | X | X | X | X | X | X | X | X |

X indicates test data available, 0 indicates no test data available.

The Effect of EFS Step Level

The second analyses focused on the effect of EFS center step level. As the results below indicate, participation at a Step 3 or 4 EFS affiliate had a positive effect on math and reading scores in the early grades. The estimated effect by certification level is shown on the first line followed by the t-statistics and significance on the line below.

Table 5. Estimated Effect on Standardized Math & Reading Scores by EFS Step Level

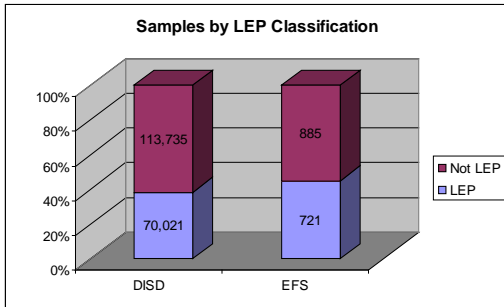
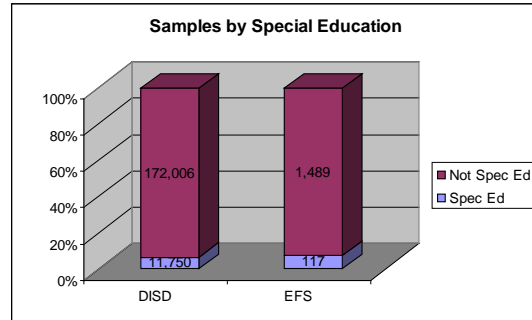
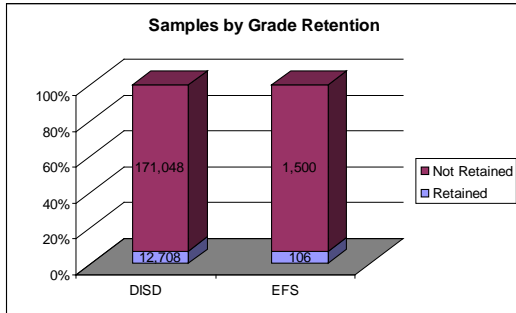
| | Kindergarten | | Grade 1 | | Grade 2 | | Grade 3 | |
|-------------------|-------------------|------------------|-------------------|------------------|-------------------|-----------------|-----------------|-------------------|
| | Math | Reading | Math | Reading | Math | Reading | Math | Reading |
| EFS | -0.228 (2.03)* | -0.098 (1.19) | -0.088 (1.44) | 0.005 (0.09) | -0.068 (0.99) | 0.015 (0.22) | -0.01 (0.12) | -0.163 (2.15)* |
| EFS: Step 3 & 4 | 0.396 (3.11)** | 0.171 (1.80) | 0.257 (3.51)** | 0.155 (2.17)* | 0.212 (2.69)** | 0.093 (1.22) | 0.056 (0.64) | 0.188 (2.21)* |
| Net effect | 0.168 | 0.073 | 0.169 | 0.160 | 0.144 | 0.108 | 0.046 | 0.025 |
| Percentile points | 3.4 | | 3.4 | | 2.9 | | 0.5 | |

** significant at 5% level; ** at 1% level*

Again, standardized coefficients are converted to percentile points to better understand these effects. EFS students who attended accredited centers scored 3.4 percentile points higher on the kindergarten math assessments, 3.4 percentile points higher in first grade and 2.9 percentile points higher in second grade. The effect for third grade was positive but insignificant for math. As for reading, the EFS students from Step 3 and 4 centers scored 3.2 percentile points higher than their DISD peers in first grade and 0.5 in third grade. The effect for kindergarten and second grade was not significantly different than their peers.

Scores for students that attended EFS affiliates that were Step 1 or 2, represented here by the point estimates for EFS, were not significantly different from all other DISD students, holding all else constant. These findings point out that center progression through the certification process explains all of the advantage for EFS participation in the first analyses.

Retained in Grade, LEP and Special Education



The probability of on-time grade-to-grade transitions, referral to special education and LEP classification was estimated comparing EFS students to all other DISD students. As with the math and reading results described above, these analyses looked at the effect of EFS on educational outcomes as well as the effect of center step level. The results are presented below. The first line is the predicted probability; the second line is the standard error, used to calculate the confidence interval for the estimate. Asterisks indicate the statistical significance of the estimate.

The Effect of EFS

Table 6. Predicted Probability of Retention, LEP and Special Education by EFS Participation

| | Retained | Classified LEP | Referral to Special Education | Special Ed, Fixed Effect by Campus |
|-----|----------|----------------|-------------------------------|------------------------------------|
| EFS | -0.065 | -0.121 | 0.107 | 0.107 |
| | 0.05 | 0.016*** | 0.023*** | 0.056 |

significant at p<0.05; **p<0.01; *p<0.001*

EFS participants had 12% lower probability of being classified as limited English proficiency, than all other DISD students. The effect of EFS on grade retention was not significantly different than all other DISD students. The effect for special education was not robust across campuses under the fixed effect model. This implies that there is an unmeasured difference between campuses that is correlated with referrals to special education. The next analyses include the effect of EFS certification on grade retention, special education and LEP classification.

The Effect of EFS Step Level

Table 7. Predicted Probability of Retention, Special Education & LEP by EFS Step Level

| | Retained | Classified LEP | LEP, Fixed Effect by Campus | Referral to Special Ed |
|-----------------|----------|----------------|-----------------------------|------------------------|
| EFS | 0.206 | -0.384 | -0.384 | 0.039 |
| | 0.098* | 0.083*** | 0.21 | 0.052 |
| EFS: Step 3 & 4 | -0.355 | 0.273 | 0.273 | 0.086 |
| | 0.114** | 0.084** | 0.22 | 0.058 |
| Net effect | -0.149 | -0.111 | | |

significant at p<0.05; **p<0.01; *p<0.001*

A student who attended an accredited EFS center had a lower probability of being retained in grade compared to all other DISD students. Participation at a Step 3 or 4 EFS center decreases the probability of being retained in grade by 15% (-0.355+0.206).

Attending a Step 3 or 4 center does not have an effect that is significantly different from all other DISD students for referrals to special education. The effect on LEP classification is indeterminate because it is not robust across campuses.

This finding implies that there are unmeasured differences across campuses that are correlated with LEP classification. Full regression results are presented in the Appendix.

Conclusions

The results indicate that accredited EFS affiliates have a positive effect on student success. Students who attended accredited EFS centers score better than their more advantaged classmates on math and reading assessments in the early grades. The persistence of this effect is significant given that evaluations of early childhood programs do not consistently find effects beyond kindergarten.

Increasing the probability of on-time grade-to-grade transition is a significant program advantage both to individual students and taxpayers. The effect of accredited centers on special education and classification as limited English proficient is less clear. However, the complexity and nuances of these programs often confounds research findings.

It is important to note that most of the EFS students attended a limited number of centers, so caution should be used generalizing these findings to EFS as a whole. Additional data from future waves of data collection will broaden the diversity of the sample to include students who attended all EFS affiliated centers in Dallas.

Data was not available to control for the self-selection of the students into the EFS program. Nor was data available to control for the preschool experiences, if any, of the DISD comparison group. It is unclear how this selection bias affects the estimates.

Future Steps

UTD and EFS currently plan to continue the research reported on here on an ongoing basis. Efforts are currently underway to collect current roster data from all of the ECE centers affiliated with EFS, and such data will be

collected at least semi-annually from EFS affiliates for the foreseeable future, pending additional research support.

Going forward, data collection efforts will be focused on those centers whose students primarily enroll in DISD. This should improve the efficiency of data collection as well as the match rate with DISD data. Secondly, every effort should be made to ensure participation from all EFS affiliates classified as Step 3 and Step 4. About 70% of observations for this study came from centers operated by Mi Escuelita and Avance, largely because those centers had more complete records of students from enrolled prior years when current DISD elementary students were of preschool age. In future years, analysis of data on student achievement in other ISDs and to selected charter schools in North Texas may be possible as well.

Appendix A

EFS Centers* by Certification Year and Level

| <u>Center Name</u> | <u>Yr Certified</u> | <u>Yrs Certified</u> | <u>Certification Level</u> |
|--------------------------------|---------------------|----------------------|----------------------------|
| Heaven's Little Angels | 2005 | 3 | 1 |
| Simply Unique Child Care | 2007 | 1 | 1 |
| Customize Learning Center | 2007 | 1 | 1 |
| New Connections | 2000 | 8 | 2 |
| Comunidad | 2002 | 6 | 2 |
| Hamilton Park | 2003 | 5 | 2 |
| Braswell | 2003 | 5 | 2 |
| The Redeemer's Child Care Cntr | 2004 | 4 | 2 |
| The Ranch | 2005 | 3 | 2 |
| G & J Quality Day Care | 2005 | 3 | 2 |
| Concordia | 2005 | 3 | 2 |
| Cliff Temple | 2005 | 3 | 2 |
| HH Banks Learning Center | 2005 | 3 | 2 |
| Heavenly Joy Day Care Center | 2007 | 1 | 2 |
| Heavenly Care | 2007 | 1 | 2 |
| Good Street | 1996 | 12 | 3 |
| Mi Escuelita | 1991 | 17 | 4 |
| Pee Wee Angels Day Care | 1994 | 14 | 4 |
| Avance | 2002 | 6 | 4 |
| EI Kinder Bilingual Academy | 2003 | 5 | 4 |

**Centers with students who matched with DISD*

Means and Frequencies of Standardized Reading Scores: By Year, Program, Grade & Ethnicity

| Grade & Ethnicity | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | | TOTALS | |
|-------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS |
| Grade: KG | | | | | | | | | | | | |
| Native Am | -0.16 | | -0.1 | | 0.24 | | -1.47 | | | | -0.05 | |
| | 35 | | 20 | | 22 | | | | | | 78 | |
| Asian | 0.21 | 0.33 | 0.36 | 1.45 | 0.31 | | -0.71 | | -0.11 | | 0.28 | 0.89 |
| | 132 | | 126 | | 102 | | | | | | 365 | |
| Afr American | 0.08 | -0.18 | 0.04 | -0.2 | -0.01 | 0.03 | -0.23 | | -0.15 | | 0.04 | -0.1 |
| | 3,480 | 36 | 3,256 | 48 | 3,069 | 64 | | | | | 9,815 | 148 |
| Latin | -0.05 | -0.11 | -0.03 | 0.13 | -0.02 | 0.12 | 0 | 0.01 | 0 | 0.2 | -0.02 | 0.06 |
| | 7,095 | 91 | 7,512 | 87 | 7,596 | 93 | 4,708 | 79 | 6,078 | 60 | 32,989 | 410 |
| White | 0.08 | -0.05 | 0.1 | 0.39 | 0.15 | 0.89 | -1.01 | | 0.49 | | 0.1 | 0.4 |
| | 737 | | 695 | | 640 | | | | | | 2,078 | 8 |
| Total | 0 | -0.13 | 0 | 0.04 | 0 | 0.09 | 0 | 0.01 | 0 | 0.2 | 0 | 0.03 |
| | 11,479 | 130 | 11,609 | 140 | 11,429 | 159 | 4,720 | 79 | 6,088 | 60 | 45,325 | 568 |
| Grade: 1 | | | | | | | | | | | | |
| Native Am | 0.03 | | 0.03 | | 0.12 | | 0.25 | | -0.07 | | 0.07 | |
| | 35 | | 34 | | 33 | | 23 | | 26 | | 151 | |
| Asian | 0.33 | -0.83 | 0.5 | -0.49 | 0.4 | 0.59 | 0.37 | | 0.38 | 0.67 | 0.4 | -0.02 |
| | 132 | | 116 | | 127 | | 95 | | 117 | 1 | 587 | |
| Afr American | -0.02 | -0.21 | 0.03 | 0.12 | -0.01 | 0.02 | -0.05 | 0.14 | -0.05 | 0.03 | -0.02 | 0.05 |
| | 3,580 | 30 | 3,520 | 42 | 3,345 | 52 | 3,386 | 67 | 3,479 | 68 | 17,310 | 259 |
| Latin | -0.03 | 0.08 | -0.05 | 0 | -0.04 | 0.12 | -0.02 | 0.17 | -0.02 | 0.26 | -0.03 | 0.13 |
| | 7,956 | 122 | 7,917 | 97 | 8,401 | 100 | 8,697 | 118 | 9,237 | 114 | 42,208 | 551 |
| White | 0.37 | 1.42 | 0.3 | -0.89 | 0.48 | 0.74 | 0.42 | 0.92 | 0.4 | 1.08 | 0.39 | 0.84 |
| | 774 | | 773 | | 667 | | 640 | | 607 | 6 | 3,461 | 15 |
| Total | 0 | 0.03 | 0 | 0.03 | 0 | 0.11 | 0 | 0.17 | 0 | 0.21 | 0 | 0.12 |
| | 12,477 | 154 | 12,360 | 141 | 12,573 | 158 | 12,841 | 187 | 13,466 | 189 | 63,717 | 829 |
| Grade: 2 | | | | | | | | | | | | |
| Native Am | 0.18 | | 0.21 | | 0.37 | | 0.47 | | 0.35 | | 0.31 | |
| | 40 | | 32 | | 35 | | 29 | | 26 | | 162 | |
| Asian | 0.31 | 0.29 | 0.45 | -0.01 | 0.43 | | 0.42 | | 0.57 | | 0.42 | 0.14 |
| | 143 | | 125 | | 126 | | 116 | | 89 | | 599 | 6 |
| Afr American | -0.04 | -0.28 | 0.07 | 0.22 | -0.02 | 0.05 | 0.03 | 0.08 | -0.07 | -0.01 | -0.01 | 0.03 |
| | 3,817 | 19 | 3,350 | 26 | 3,362 | 40 | 3,329 | 51 | 3,271 | 64 | 17,129 | 200 |
| Latin | -0.04 | 0.09 | -0.09 | 0.04 | -0.05 | 0.04 | -0.07 | -0.02 | -0.02 | 0.13 | -0.06 | 0.06 |
| | 7,688 | 143 | 7,788 | 121 | 8,082 | 102 | 8,399 | 94 | 8,558 | 112 | 40,515 | 572 |
| White | 0.52 | 0.96 | 0.62 | | 0.6 | | 0.74 | 0.12 | 0.55 | 1.46 | 0.6 | 0.73 |
| | 753 | | 710 | | 674 | | 601 | | 597 | 3 | 3,335 | 8 |
| Total | 0 | 0.06 | 0 | 0.07 | 0 | 0.04 | 0 | 0.02 | 0 | 0.1 | 0 | 0.06 |
| | 12,441 | 166 | 12,005 | 149 | 12,279 | 142 | 12,474 | 150 | 12,541 | 179 | 61,740 | 786 |
| Grade: 3 | | | | | | | | | | | | |
| Native Am | 0.49 | | 0.15 | | -0.07 | | 0.29 | | 0.22 | | 0.21 | |
| | 28 | | 32 | | 33 | | 36 | | 23 | | 152 | |
| Asian | 0.25 | 0.56 | 0.39 | 0.33 | 0.42 | -0.72 | 0.37 | | 0.49 | 2.3 | 0.38 | 0.41 |
| | 136 | | 135 | | 116 | | 115 | | 110 | 1 | 612 | 10 |
| Afr American | -0.02 | -0.33 | 0.04 | -0.25 | -0.03 | -0.08 | -0.08 | -0.23 | -0.08 | -0.3 | -0.03 | -0.25 |
| | 3,661 | 23 | 3,370 | 19 | 3,062 | 22 | 3,303 | 40 | 3,192 | 50 | 16,588 | 154 |
| Latin | -0.06 | -0.17 | -0.08 | 0.02 | -0.05 | 0.23 | -0.02 | -0.02 | -0.02 | 0.17 | -0.04 | 0.06 |
| | 7,204 | 86 | 7,181 | 139 | 7,511 | 121 | 7,836 | 101 | 8,146 | 89 | 37,878 | 536 |
| White | 0.68 | 0.59 | 0.54 | | 0.62 | | 0.7 | | 0.61 | -0.1 | 0.63 | 0.1 |
| | 737 | | 651 | | 615 | | 584 | | 545 | 5 | 3,132 | 7 |
| Total | 0 | -0.16 | 0 | -0.01 | 0 | 0.17 | 0 | -0.08 | 0 | 0.01 | 0 | -0.01 |
| | 11,766 | 115 | 11,369 | 161 | 11,337 | 145 | 11,874 | 141 | 12,016 | 145 | 58,362 | 707 |

Means and Frequencies of Standardized Math Scores: By Year, Program, Grade & Ethnicity

| Grade & Ethnicity | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | | TOTALS | |
|-------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS |
| Grade: KG | | | | | | | | | | | | |
| Native Am | -0.96 | | -0.85 | | 0.7 | | -0.01 | | | | -0.02 | |
| | | | | | | | 29 | | | | 33 | |
| Asian | -0.44 | | 1.22 | | | | 0.28 | 0.36 | | | 0.29 | 0.36 |
| | | | | | | | 124 | | | | 126 | |
| Afr Am | -0.19 | | -1.1 | | -0.12 | | -0.1 | -0.13 | | | -0.1 | -0.13 |
| | 8 | | | | | | 3,356 | 72 | | | 3,369 | 72 |
| Latin | 0 | 0.06 | 0 | 0.08 | 0 | 0.17 | -0.01 | 0.13 | -0.01 | 1.68 | 0 | 0.12 |
| | 3,971 | 47 | 3,568 | 35 | 4,100 | 51 | 8,642 | 120 | 220 | | 20,501 | 254 |
| White | -0.06 | | 0.26 | | 0.71 | | 0.6 | 0.06 | | | 0.59 | 0.06 |
| | | | | | | | 623 | | | | 635 | |
| Total | 0.00 | 0.06 | 0 | 0.08 | 0 | 0.17 | 0 | 0.03 | -0.01 | 1.68 | 0 | 0.07 |
| | 3,986 | 47 | 3,576 | 35 | 4,108 | 51 | 12,774 | 198 | 220 | | 24,664 | 332 |
| Grade: 1 | | | | | | | | | | | | |
| Native Am | 0.03 | | -0.1 | | 0.02 | | 0.52 | | -0.16 | | 0.04 | |
| | 35 | | 31 | | 33 | | 22 | | 26 | | 147 | |
| Asian | 0.41 | -1.7 | 0.53 | -0.59 | 0.46 | 0.75 | 0.62 | | 0.57 | 0.83 | 0.51 | -0.18 |
| | 131 | | 116 | | 131 | | 97 | | 118 | | 593 | |
| Afr Am | -0.09 | -0.46 | -0.07 | 0.14 | -0.11 | -0.14 | -0.18 | -0.07 | -0.03 | 0.06 | -0.1 | -0.06 |
| | 3,550 | 29 | 3,445 | 39 | 3,310 | 52 | 3,459 | 68 | 3,447 | 70 | 17,211 | 258 |
| Latin | -0.01 | 0.17 | -0.02 | 0.02 | -0.01 | 0.2 | 0.02 | 0.14 | -0.06 | 0.26 | -0.01 | 0.15 |
| | 8,062 | 124 | 8,038 | 97 | 8,408 | 99 | 8,835 | 120 | 5,977 | 64 | 39,320 | 504 |
| White | 0.4 | 1.57 | 0.46 | -1.79 | 0.55 | 0.4 | 0.52 | 1.4 | 0.69 | 0.54 | 0.52 | 0.52 |
| | 760 | | 754 | | 661 | | 651 | | 603 | 6 | 3,429 | 15 |
| Total | 0 | 0.05 | 0 | 0.03 | 0 | 0.09 | 0 | 0.08 | 0 | 0.18 | 0 | 0.09 |
| | 12,538 | 155 | 12,384 | 138 | 12,543 | 157 | 13,064 | 190 | 10,171 | 141 | 60,700 | 781 |
| Grade: 2 | | | | | | | | | | | | |
| Native Am | 0.32 | | -0.06 | | 0.27 | | 0.17 | | 0.25 | | 0.19 | |
| | 40 | | 35 | | 34 | | 28 | | 28 | | 165 | |
| Asian | 0.63 | 1.04 | 0.51 | 0.95 | 0.48 | | 0.64 | 1.01 | 0.6 | | 0.57 | |
| | 143 | | 130 | | 128 | | 114 | | 91 | | 606 | |
| Afr Am | -0.15 | -0.15 | -0.09 | -0.26 | -0.16 | -0.09 | -0.2 | -0.31 | -0.15 | -0.06 | -0.15 | -0.16 |
| | 3,726 | 18 | 3,278 | 24 | 3,234 | 38 | 3,428 | 52 | 3,289 | 64 | 16,955 | 196 |
| Latin | 0.01 | 0.09 | -0.01 | 0.2 | 0.01 | -0.01 | 0.03 | 0.3 | 0.01 | 0.2 | 0.01 | 0.15 |
| | 7,676 | 142 | 7,856 | 122 | 8,094 | 105 | 8,553 | 94 | 8,543 | 113 | 40,722 | 576 |
| White | 0.47 | -0.95 | 0.49 | | 0.53 | | 0.51 | 0.02 | 0.52 | 1.24 | 0.5 | 0.35 |
| | 733 | | 697 | | 672 | | 617 | | 596 | | 3,315 | 8 |
| Total | 0 | 0.07 | 0 | 0.14 | 0 | -0.03 | 0 | 0.09 | 0 | 0.13 | 0 | 0.08 |
| | 12,318 | 164 | 11,996 | 148 | 12,162 | 143 | 12,740 | 151 | 12,547 | 180 | 61,763 | 786 |
| Grade: 3 | | | | | | | | | | | | |
| Native Am | 0.6 | | 0.18 | | 0.14 | | 0.24 | | 0.36 | | 0.29 | |
| | 27 | | 31 | | 34 | | 33 | | 24 | | 149 | |
| Asian | 0.4 | -0.04 | 0.75 | 1.4 | 0.66 | -0.18 | 0.7 | | 0.71 | 0.51 | 0.64 | 0.42 |
| | 130 | | 136 | | 116 | | 110 | | 109 | | 601 | 10 |
| Afr Am | -0.09 | -0.51 | -0.08 | -0.23 | -0.14 | -0.11 | -0.19 | -0.13 | -0.21 | -0.22 | -0.14 | -0.23 |
| | 3,577 | 23 | 3,381 | 19 | 3,070 | 22 | 3,265 | 39 | 3,169 | 49 | 16,462 | 152 |
| Latin | -0.02 | -0.06 | -0.02 | 0.07 | -0.01 | 0.25 | 0.02 | -0.01 | 0.04 | 0.28 | 0 | 0.11 |
| | 7,146 | 84 | 7,233 | 140 | 7,523 | 123 | 7,812 | 102 | 8,149 | 90 | 37,863 | 539 |
| White | 0.58 | 1.67 | 0.49 | | 0.67 | | 0.64 | | 0.51 | -0.28 | 0.58 | 0.28 |
| | 725 | | 664 | | 603 | | 586 | | 533 | | 3,111 | 7 |
| Total | 0 | -0.12 | 0 | 0.06 | 0 | 0.19 | 0 | -0.04 | 0 | 0.09 | 0 | 0.04 |
| | 11,605 | 113 | 11,445 | 162 | 11,346 | 147 | 11,806 | 141 | 11,984 | 145 | 58,186 | 708 |

Frequency of Special Education by Grade Level & Year

| Grade & Sp Ed | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | | TOTALS | | | |
|------------------|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|-------|-----|
| | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | | |
| Kindergarten | | | | | | | | | | | | | | |
| Not Sp Ed | 11,303 | 126 | 14,844 | 172 | 15,123 | 203 | 16,995 | 271 | 6,175 | 58 | 64,440 | 97% | 830 | 97% |
| Sp Ed | 335 | 6 | 341 | | 414 | 7 | 497 | 6 | 133 | | 1,720 | 3% | 25 | 3% |
| Total | 11,638 | 132 | 15,185 | 175 | 15,537 | 210 | 17,492 | 277 | 6,308 | 61 | 66,160 | | 855 | |
| Grade 1 | | | | | | | | | | | | | | |
| Not Sp Ed | 24,032 | 295 | 23,753 | 267 | 24,104 | 299 | 24,737 | 349 | 22,702 | 326 | 119,328 | 96% | 1,536 | 95% |
| Sp Ed | 983 | 14 | 991 | 12 | 1,012 | 16 | 1,170 | 28 | 934 | | 5,090 | 4% | 74 | 5% |
| Total | 25,015 | 309 | 24,744 | 279 | 25,116 | 315 | 25,907 | 377 | 23,636 | 330 | 124,418 | | 1,610 | |
| Grade 2 | | | | | | | | | | | | | | |
| Not Sp Ed | 23,489 | 317 | 22,869 | 279 | 23,128 | 263 | 23,903 | 282 | 23,823 | 337 | 117,212 | 95% | 1,478 | 94% |
| Sp Ed | 1,270 | 13 | 1,132 | 18 | 1,313 | 22 | 1,312 | 19 | 1,266 | 22 | 6,293 | 5% | 94 | 6% |
| Total | 24,759 | 330 | 24,001 | 297 | 24,441 | 285 | 25,215 | 301 | 25,089 | 359 | 123,505 | | 1,572 | |
| Grade 3 | | | | | | | | | | | | | | |
| Not Sp Ed | 22,415 | 213 | 21,982 | 320 | 21,797 | 279 | 22,881 | 265 | 23,205 | 276 | 112,280 | 96% | 1,353 | 96% |
| Sp Ed | 955 | 15 | 833 | | 888 | 13 | 798 | 17 | 795 | 14 | 4,269 | 4% | 62 | 4% |
| Total | 23,370 | 228 | 22,815 | 323 | 22,685 | 292 | 23,679 | 282 | 24,000 | 290 | 116,549 | | 1,415 | |
| Grade 4 | | | | | | | | | | | | | | |
| Not Sp Ed | 21,181 | 224 | 20,887 | 202 | 20,687 | 286 | 20,308 | 261 | 20,944 | 250 | 104,007 | 96% | 1,223 | 96% |
| Sp Ed | 858 | 9 | 779 | 12 | 814 | | 715 | 17 | 648 | 9 | 3,814 | 4% | 50 | 4% |
| Total | 22,039 | 233 | 21,666 | 214 | 21,501 | 289 | 21,023 | 278 | 21,592 | 259 | 107,821 | | 1,273 | |
| Grade 5 | | | | | | | | | | | | | | |
| Not Sp Ed | 20,704 | 144 | 20,224 | 212 | 19,873 | 201 | 21,398 | 296 | 20,039 | 268 | 102,238 | 97% | 1,121 | 97% |
| Sp Ed | 772 | 12 | 795 | | 779 | 10 | 712 | | 631 | 12 | 3,689 | 3% | 39 | 3% |
| Total | 21,476 | 156 | 21,019 | 214 | 20,652 | 211 | 22,110 | 299 | 20,670 | 280 | 105,927 | | 1,160 | |
| Grade 6 | | | | | | | | | | | | | | |
| Not Sp Ed | 19,998 | 80 | 20,061 | 134 | 19,197 | 198 | 17,804 | 190 | 19,051 | 260 | 96,111 | 97% | 862 | 97% |
| Sp Ed | 647 | | 620 | 8 | 722 | 2 | 594 | 8 | 595 | | 3,178 | 3% | 25 | 3% |
| Total | 20,645 | 82 | 20,681 | 142 | 19,919 | 200 | 18,398 | 198 | 19,646 | 265 | 99,289 | | 887 | |
| Grade 7 | | | | | | | | | | | | | | |
| Not Sp Ed | 18,919 | 8 | 18,882 | 64 | 18,487 | 132 | 18,380 | 180 | 16,678 | 176 | 91,346 | 97% | 560 | 97% |
| Sp Ed | 690 | | 597 | | 643 | 9 | 609 | | 499 | 6 | 3,038 | 3% | 18 | 3% |
| Total | 19,609 | 8 | 19,479 | 66 | 19,130 | 141 | 18,989 | 181 | 17,177 | 182 | 94,384 | | 578 | |
| Grade 8 | | | | | | | | | | | | | | |
| Not Sp Ed | 17,983 | | 18,504 | 10 | 17,961 | 66 | 18,092 | 134 | 17,803 | 180 | 90,343 | 97% | 392 | 97% |
| Sp Ed | 651 | | 632 | | 662 | | 520 | 11 | 503 | | 2,968 | 3% | 14 | 3% |
| Total | 18,634 | | 19,136 | 10 | 18,623 | 66 | 18,612 | 145 | 18,306 | 183 | 93,311 | | 406 | |

Frequency of LEP by Grade Level & Year

| Grade & LEP | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | | TOTALS | | | |
|--------------|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|-------|-----|
| | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | DISD | EFS | | |
| Kindergarten | | | | | | | | | | | | | | |
| Not LEP | 6,464 | 77 | 6,968 | 86 | 6,622 | 91 | 7,324 | 107 | 380 | | 27,758 | 42% | 363 | 42% |
| LEP | 5,174 | 55 | 8,217 | 89 | 8,915 | 119 | 10,168 | 170 | 5,928 | 59 | 38,402 | 58% | 492 | 58% |
| Total | 11,638 | 132 | 15,185 | 175 | 15,537 | 210 | 17,492 | 277 | 6,308 | 61 | 66,160 | | 855 | |
| Grade 1 | | | | | | | | | | | | | | |
| Not LEP | 12,650 | 148 | 12,987 | 149 | 13,648 | 184 | 13,930 | 197 | 14,063 | 197 | 67,278 | 54% | 875 | 54% |
| LEP | 12,365 | 161 | 11,757 | 130 | 11,468 | 131 | 11,977 | 180 | 9,573 | 133 | 57,140 | 46% | 735 | 46% |
| Total | 25,015 | 309 | 24,744 | 279 | 25,116 | 315 | 25,907 | 377 | 23,636 | 330 | 124,418 | | 1,610 | |
| Grade 2 | | | | | | | | | | | | | | |
| Not LEP | 12,397 | 134 | 11,760 | 135 | 12,182 | 154 | 13,446 | 169 | 13,227 | 185 | 63,012 | 51% | 777 | 49% |
| LEP | 12,362 | 196 | 12,241 | 162 | 12,259 | 131 | 11,769 | 132 | 11,862 | 174 | 60,493 | 49% | 795 | 51% |
| Total | 24,759 | 330 | 24,001 | 297 | 24,441 | 285 | 25,215 | 301 | 25,089 | 359 | 123,505 | | 1,572 | |
| Grade 3 | | | | | | | | | | | | | | |
| Not LEP | 13,251 | 122 | 13,239 | 175 | 12,708 | 155 | 13,472 | 164 | 13,472 | 174 | 66,142 | 57% | 790 | 56% |
| LEP | 10,119 | 106 | 9,576 | 148 | 9,977 | 137 | 10,207 | 118 | 10,528 | 116 | 50,407 | 43% | 625 | 44% |
| Total | 23,370 | 228 | 22,815 | 323 | 22,685 | 292 | 23,679 | 282 | 24,000 | 290 | 116,549 | | 1,415 | |
| Grade 4 | | | | | | | | | | | | | | |
| Not LEP | 16,357 | 162 | 16,001 | 164 | 18,125 | 253 | 16,148 | 213 | 15,165 | 193 | 81,796 | 76% | 985 | 77% |
| LEP | 5,682 | 71 | 5,665 | 50 | 3,376 | 36 | 4,875 | 65 | 6,427 | 66 | 26,025 | 24% | 288 | 23% |
| Total | 22,039 | 233 | 21,666 | 214 | 21,501 | 289 | 21,023 | 278 | 21,592 | 259 | 107,821 | | 1,273 | |
| Grade 5 | | | | | | | | | | | | | | |
| Not LEP | 17,365 | 131 | 16,551 | 173 | 17,011 | 171 | 18,653 | 270 | 16,384 | 220 | 85,964 | 81% | 965 | 83% |
| LEP | 4,111 | 25 | 4,468 | 41 | 3,641 | 40 | 3,457 | 29 | 4,286 | 60 | 19,963 | 19% | 195 | 17% |
| Total | 21,476 | 156 | 21,019 | 214 | 20,652 | 211 | 22,110 | 299 | 20,670 | 280 | 105,927 | | 1,160 | |
| Grade 6 | | | | | | | | | | | | | | |
| Not LEP | 17,745 | 80 | 17,208 | 127 | 16,428 | 172 | 16,205 | 176 | 16,899 | 241 | 84,485 | 85% | 796 | 90% |
| LEP | 2,900 | | 3,473 | 15 | 3,491 | 28 | 2,193 | 22 | 2,747 | 24 | 14,804 | 15% | 91 | 10% |
| Total | 20,645 | 82 | 20,681 | 142 | 19,919 | 200 | 18,398 | 198 | 19,646 | 265 | 99,289 | | 887 | |
| Grade 7 | | | | | | | | | | | | | | |
| Not LEP | 17,110 | 8 | 16,913 | 64 | 16,511 | 131 | 16,431 | 165 | 15,074 | 168 | 82,039 | 87% | 536 | 93% |
| LEP | 2,499 | | 2,566 | | 2,619 | 10 | 2,558 | 16 | 2,103 | 14 | 12,345 | 13% | 42 | 7% |
| Total | 19,609 | 8 | 19,479 | 66 | 19,130 | 141 | 18,989 | 181 | 17,177 | 182 | 94,384 | | 578 | |
| Grade 8 | | | | | | | | | | | | | | |
| Not LEP | 16,242 | | 16,598 | 10 | 16,320 | 64 | 16,170 | 129 | 15,586 | 161 | 80,916 | 87% | 366 | 90% |
| LEP | 2,392 | | 2,538 | | 2,303 | | 2,442 | 16 | 2,720 | 22 | 12,395 | 13% | 40 | 10% |
| Total | 18,634 | | 19,136 | 10 | 18,623 | 66 | 18,612 | 145 | 18,306 | 183 | 93,311 | | 406 | |

Estimated Effect of EFS on Standardized Math Scores by Grade Level

| | KG | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 |
|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| EFS | 0.079 (1.48) | 0.09 (2.66)** | 0.094 (2.77)** | 0.035 (0.98) | 0.031 (0.82) | 0.042 (1.08) | 0.009 (0.21) | 0.029 (0.53) | 0.061 (0.93) |
| Limited English Proficiency | -0.195 (8.09)** | -0.156 (13.87)** | -0.115 (10.65)** | -0.344 (34.50)** | -0.478 (46.31)** | -0.555 (49.60)** | -0.707 (57.12)** | -0.73 (55.33)** | -0.748 (55.83)** |
| Special Education | -0.543 (13.64)** | -0.485 (24.64)** | -0.788 (44.44)** | -0.455 (23.09)** | -0.549 (27.53)** | -0.474 (23.00)** | -0.607 (27.63)** | -0.621 (27.11)** | -0.615 (25.58)** |
| Retained in grade | -0.853 (33.30)** | -0.765 (67.96)** | -0.646 (59.24)** | -0.686 (59.78)** | -0.636 (47.46)** | -0.602 (42.55)** | -0.517 (27.47)** | -0.686 (36.53)** | -0.613 (26.76)** |
| Native American | -0.515 (2.98)** | -0.356 (4.47)** | -0.236 (3.14)** | -0.137 (1.74) | -0.195 (2.39)** | -0.098 (1.26) | -0.118 (1.50) | -0.428 (5.82)** | -0.441 (5.92)** |
| Asian | -0.246 (2.61)** | 0.022 (0.53) | 0.111 (2.66)** | 0.232 (5.55)** | 0.146 (3.49)** | 0.395 (9.28)** | 0.459 (10.56)** | 0.271 (5.88)** | 0.204 (4.37)** |
| African American | -0.63 (14.34)** | -0.506 (26.93)** | -0.552 (29.14)** | -0.595 (30.70)** | -0.633 (32.34)** | -0.513 (26.22)** | -0.577 (29.10)** | -0.804 (40.80)** | -0.799 (40.94)** |
| Latin | -0.479 (10.91)** | -0.331 (17.38)** | -0.294 (15.15)** | -0.189 (9.64)** | -0.28 (14.39)** | -0.127 (6.51)** | -0.147 (7.45)** | -0.406 (20.88)** | -0.423 (21.88)** |
| Economically Disadvantaged | -0.17 (5.88)** | -0.241 (16.88)** | -0.267 (18.73)** | -0.245 (17.15)** | -0.25 (17.47)** | -0.26 (18.55)** | -0.217 (15.96)** | -0.146 (12.89)** | -0.116 (10.88)** |
| Male | -0.069 (5.61)** | 0.02 (2.67)** | 0.079 (10.44)** | 0.061 (7.85)** | 0.083 (10.46)** | 0.042 (5.21)** | -0.006 (0.77) | -0.036 (4.25)** | -0.001 (0.09) |
| Test type: Logramos [^] | 0.146 (5.62)** | 0.128 (11.27)** | 0.044 (3.84)** | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| Test Year: 2004 | -0.036 (1.61) | 0.036 (3.05)** | 0.012 (1.03) | -0.002 (0.14) | 0.025 (2.02)* | 0.002 (0.13) | 0.018 (1.37) | 0.005 (0.40) | -0.001 (0.06) |
| Test Year: 2005 | -0.077 (3.60)** | 0.018 (1.53) | 0.041 (3.45)** | 0.009 (0.75) | -0.018 (1.41) | 0.011 (0.83) | 0.017 (1.31) | 0.021 (1.58) | 0.008 (0.56) |
| Test Year: 2006 | -0.122 (5.86)** | -0.007 (0.59) | 0.036 (3.01)** | 0.034 (2.79)** | 0.015 (1.19) | 0.03 (2.35)* | -0.025 (1.86) | 0.016 (1.18) | 0.018 (1.32) |
| Test Year: 2007 | -0.128 (1.91) | -0.037 (2.91)** | 0.001 (0.04) | 0.017 (1.37) | 0.069 (5.48)** | 0.037 (2.85)** | 0.024 (1.80) | 0.006 (0.41) | 0.029 (2.10)* |
| Constant | 0.868 (19.04)** | 0.727 (37.98)** | 0.707 (36.43)** | 0.727 (36.90)** | 0.732 (36.65)** | 0.608 (30.36)** | 0.613 (30.37)** | 0.792 (39.22)** | 0.745 (36.99)** |
| Observations | 24,996 | 61,482 | 62,548 | 58,895 | 54,982 | 53,773 | 50,436 | 47,670 | 46,948 |
| R-squared | 0.07 | 0.11 | 0.12 | 0.13 | 0.13 | 0.13 | 0.13 | 0.15 | 0.14 |

Absolute value of t-statistics in parentheses

** significant at 5% level; ** significant at 1% level*

[^]Logramos, an assessment in Spanish, is only offered in grades K - 2

Estimated Effect of EFS Certification on Standardized Math Scores by Grade Level

| | KG | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 |
|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| EFS | -0.228 (2.03)* | -0.088 (1.44) | -0.068 (0.99) | -0.01 (0.12) | -0.019 (0.19) | 0.078 (0.69) | 0.013 (0.09) | 0.012 (0.07) | -0.077 (0.38) |
| EFS: Step 3 & 4 | 0.396 (3.11)** | 0.257 (3.51)** | 0.212 (2.69)** | 0.056 (0.64) | 0.058 (0.56) | -0.041 (0.34) | -0.004 (0.03) | 0.018 (0.10) | 0.153 (0.72) |
| Limited English Proficiency | -0.196 (8.13)** | -0.156 (13.90)** | -0.115 (10.65)** | -0.344 (34.49)** | -0.478 (46.29)** | -0.555 (49.59)** | -0.707 (57.13)** | -0.73 (55.32)** | -0.748 (55.83)** |
| Special Education | -0.545 (13.69)** | -0.485 (24.63)** | -0.788 (44.45)** | -0.456 (23.12)** | -0.55 (27.57)** | -0.474 (23.00)** | -0.607 (27.63)** | -0.621 (27.11)** | -0.615 (25.58)** |
| Retained in grade | -0.853 (33.32)** | -0.766 (67.99)** | -0.646 (59.24)** | -0.686 (59.78)** | -0.636 (47.47)** | -0.601 (42.53)** | -0.517 (27.48)** | -0.686 (36.53)** | -0.613 (26.76)** |
| Native American | -0.517 (2.99)** | -0.356 (4.48)** | -0.237 (3.15)** | -0.137 (1.74) | -0.195 (2.39)* | -0.098 (1.26) | -0.118 (1.50) | -0.428 (5.82)** | -0.441 (5.92)** |
| Asian | -0.246 (2.61)** | 0.022 (0.51) | 0.11 (2.64)** | 0.232 (5.54)** | 0.146 (3.48)** | 0.395 (9.28)** | 0.459 (10.56)** | 0.271 (5.88)** | 0.204 (4.37)** |
| African American | -0.628 (14.30)** | -0.505 (26.87)** | -0.551 (29.09)** | -0.595 (30.68)** | -0.633 (32.33)** | -0.513 (26.22)** | -0.577 (29.10)** | -0.804 (40.80)** | -0.799 (40.93)** |
| Latin | -0.481 (10.97)** | -0.333 (17.44)** | -0.295 (15.20)** | -0.19 (9.65)** | -0.28 (14.40)** | -0.127 (6.51)** | -0.147 (7.45)** | -0.406 (20.88)** | -0.423 (21.88)** |
| Economically Disadvantaged | -0.17 (5.88)** | -0.241 (16.88)** | -0.267 (18.71)** | -0.245 (17.14)** | -0.25 (17.47)** | -0.26 (18.55)** | -0.217 (15.96)** | -0.146 (12.89)** | -0.116 (10.88)** |
| Male | -0.068 (5.58)** | 0.021 (2.69)** | 0.079 (10.46)** | 0.061 (7.86)** | 0.083 (10.45)** | 0.042 (5.21)** | -0.006 (0.76) | -0.036 (4.24)** | -0.001 (0.09) |
| Test type: Logramos [^] | 0.146 (5.60)** | 0.129 (11.30)** | 0.044 (3.85)** | 0 (0.00)** | 0 (0.00)** | 0 (0.00)** | 0 (0.00)** | 0 (0.00)** | 0 (0.00)** |
| Test Year: 2004 | -0.035 (1.60) | 0.037 (3.07)** | 0.013 (1.05) | -0.002 (0.16) | 0.025 (2.01)* | 0.002 (0.13) | 0.018 (1.37) | 0.005 (0.40) | -0.001 (0.06) |
| Test Year: 2005 | -0.077 (3.59)** | 0.019 (1.57) | 0.042 (3.51)** | 0.009 (0.75) | -0.018 (1.40) | 0.011 (0.83) | 0.017 (1.31) | 0.021 (1.58) | 0.008 (0.56) |
| Test Year: 2006 | -0.123 (5.88)** | -0.006 (0.55) | 0.036 (3.07)** | 0.034 (2.78)** | 0.015 (1.19) | 0.03 (2.36)* | -0.025 (1.86) | 0.016 (1.18) | 0.018 (1.31) |
| Test Year: 2007 | -0.127 (19.10)** | -0.037 (37.99)** | 0.001 (36.41)** | 0.017 (36.90)** | 0.069 (54.77)** | 0.037 (30.36)** | 0.024 (30.37)** | 0.006 (39.22)** | 0.029 (36.99)** |
| Constant | 0.871 (19.10)** | 0.727 (37.99)** | 0.707 (36.41)** | 0.727 (36.90)** | 0.732 (36.65)** | 0.608 (30.36)** | 0.613 (30.37)** | 0.792 (39.22)** | 0.745 (36.99)** |
| Observations | 24,995 | 61,484 | 62,547 | 58,896 | 54,981 | 53,773 | 50,437 | 47,669 | 46,948 |
| R-squared | 0.07 | 0.11 | 0.12 | 0.13 | 0.13 | 0.13 | 0.13 | 0.15 | 0.14 |

Absolute value of t-statistics in parentheses

** significant at 5% level; ** significant at 1% level*

[^]Logramos, an assessment in Spanish, is only offered in grades K - 2

Estimated Effect of EFS on Standardized Reading Scores by Grade Level

| | KG | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 |
|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| EFS | 0.03 (0.73) | 0.114 (3.51)** | 0.085 (2.61)** | -0.014 (0.39) | 0.022 (0.59) | 0.04 (1.04) | 0.056 (1.27) | 0.006 (0.11) | -0.021 (0.32) |
| Limited English Proficiency | -0.085 (5.33)** | -0.167 (14.42)** | -0.311 (29.50)** | -0.446 (45.79)** | -0.57 (55.26)** | -0.697 (63.11)** | -0.861 (69.46)** | -0.977 (75.14)** | -1.024 (78.12)** |
| Special Education | -0.21 (7.23)** | -0.555 (30.18)** | -0.916 (56.30)** | -0.574 (27.15)** | -0.489 (20.61)** | -0.503 (21.38)** | -0.595 (23.07)** | -0.655 (26.38)** | -0.638 (26.04)** |
| Retained in grade | -0.528 (30.80)** | -0.827 (75.33)** | -0.719 (67.79)** | -0.761 (67.91)** | -0.671 (50.11)** | -0.637 (45.87)** | -0.492 (26.35)** | -0.632 (34.40)** | -0.514 (23.08)** |
| Native American | -0.099 (0.87) | -0.175 (2.25)* | -0.168 (2.29)* | -0.232 (3.05)** | -0.318 (3.89)** | -0.327 (4.31)** | -0.261 (3.31)** | -0.462 (6.43)** | -0.464 (6.37)** |
| Asian | 0.211 (3.75)** | 0.032 (0.76) | -0.052 (1.28) | -0.029 (0.71) | -0.088 (2.10)* | 0.018 (0.43) | 0.03 (0.70) | -0.04 (0.89) | -0.134 (2.94)** |
| African American | 0.011 (0.42) | -0.284 (15.37)** | -0.475 (26.01)** | -0.524 (27.79)** | -0.554 (28.43)** | -0.54 (28.16)** | -0.537 (27.38)** | -0.719 (37.29)** | -0.717 (37.76)** |
| Latin | -0.053 (2.07)* | -0.23 (12.25)** | -0.326 (17.42)** | -0.201 (10.50)** | -0.318 (16.43)** | -0.299 (15.71)** | -0.296 (15.19)** | -0.423 (22.26)** | -0.461 (24.50)** |
| Economically Disadvantaged | -0.158 (8.64)** | -0.305 (21.68)** | -0.357 (25.89)** | -0.282 (20.66)** | -0.331 (23.26)** | -0.343 (25.24)** | -0.338 (25.18)** | -0.227 (20.46)** | -0.192 (18.52)** |
| Male | -0.082 (8.88)** | -0.173 (23.44)** | -0.124 (16.97)** | -0.1 (13.23)** | -0.112 (14.16)** | -0.078 (9.87)** | -0.127 (15.44)** | -0.161 (19.42)** | -0.102 (12.16)** |
| Test type: Logramos [^] | 0.13 (8.06)** | 0.178 (16.30)** | 0.204 (18.61)** | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| Test Year: 2004 | -0.008 (0.62) | 0.044 (3.75)** | 0.02 (1.73) | -0.007 (0.55) | 0.028 (2.22)* | 0.006 (0.51) | 0.025 (1.99)* | 0.005 (0.35) | -0.002 (0.18) |
| Test Year: 2005 | -0.027 (2.09)* | 0.027 (2.31)* | 0.057 (4.96)** | 0.005 (0.45) | -0.023 (1.85) | 0.016 (1.26) | 0.027 (2.07)* | 0.026 (2.03)* | 0.011 (0.85) |
| Test Year: 2006 | -0.067 (3.61)** | -0.015 (1.27) | 0.018 (1.58) | 0.036 (3.02)** | 0.02 (1.63) | 0.04 (3.22)** | -0.017 (1.26) | 0.021 (1.62) | 0.021 (1.62) |
| Test Year: 2007 | -0.07 (4.03)** | -0.081 (6.91)** | -0.021 (1.87) | 0.021 (1.75) | 0.083 (6.64)** | 0.059 (4.66)** | 0.038 (2.93)** | 0.018 (1.37) | 0.044 (3.33)** |
| Constant | 0.279 (11.41)** | 0.758 (40.23)** | 0.987 (52.65)** | 0.887 (46.20)** | 0.917 (46.10)** | 0.876 (44.54)** | 0.863 (43.25)** | 0.923 (46.79)** | 0.875 (44.65)** |
| Observations | 45,893 | 64,546 | 62,526 | 59,069 | 54,112 | 53,315 | 49,737 | 47,293 | 46,771 |
| R-squared | 0.03 | 0.13 | 0.17 | 0.16 | 0.15 | 0.17 | 0.16 | 0.2 | 0.19 |

Absolute value of t-statistics in parentheses

** significant at 5% level; ** significant at 1% level*

[^]Logramos, an assessment in Spanish, is only offered in grades K - 2

Estimated Effect of EFS Certification on Standardized Reading Scores by Grade Level

| | KG | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 |
|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| EFS | -0.098 (1.19) | 0.005 (0.09) | 0.015 (0.22) | -0.163 (2.15)* | 0.029 (0.30) | -0.069 (0.62) | 0.066 (0.46) | -0.076 (0.47) | 0.097 (0.48) |
| EFS: Step 3 & 4 | 0.171 (1.80) | 0.155 (2.17)* | 0.093 (1.22) | 0.189 (2.21)* | -0.008 (0.08) | 0.124 (1.05) | -0.012 (0.08) | 0.091 (0.53) | -0.13 (0.61) |
| Limited English Proficiency | -0.085 (5.34)** | -0.167 (14.44)** | -0.311 (29.50)** | -0.446 (45.78)** | -0.57 (55.26)** | -0.697 (63.10)** | -0.861 (69.45)** | -0.977 (75.14)** | -1.025 (78.12)** |
| Special Education | -0.21 (7.24)** | -0.555 (30.18)** | -0.916 (56.31)** | -0.574 (27.16)** | -0.489 (20.61)** | -0.504 (21.39)** | -0.595 (23.07)** | -0.655 (26.38)** | -0.638 (26.03)** |
| Retained in grade | -0.528 (30.78)** | -0.827 (75.32)** | -0.719 (67.78)** | -0.761 (67.88)** | -0.671 (50.10)** | -0.637 (45.85)** | -0.492 (26.35)** | -0.632 (34.40)** | -0.514 (23.08)** |
| Native American | -0.1 (0.88) | -0.175 (2.26)* | -0.168 (2.29)* | -0.232 (3.05)** | -0.318 (3.89)** | -0.327 (4.31)** | -0.261 (3.31)** | -0.462 (6.43)** | -0.464 (6.37)** |
| Asian | 0.211 (3.74)** | 0.031 (0.75) | -0.052 (1.29) | -0.03 (0.73) | -0.088 (2.10)* | 0.018 (0.42) | 0.03 (0.70) | -0.04 (0.89) | -0.134 (2.94)** |
| African American | 0.011 (0.45) | -0.283 (15.33)** | -0.475 (25.98)** | -0.524 (27.74)** | -0.555 (28.42)** | -0.54 (28.13)** | -0.537 (27.38)** | -0.719 (37.27)** | -0.717 (37.76)** |
| Latin | -0.054 (2.10)* | -0.23 (12.29)** | -0.327 (17.44)** | -0.202 (10.54)** | -0.318 (16.42)** | -0.3 (15.72)** | -0.296 (15.19)** | -0.424 (22.27)** | -0.461 (24.49)** |
| Economically Disadvantaged | -0.158 (8.63)** | -0.305 (21.68)** | -0.357 (25.88)** | -0.282 (20.65)** | -0.331 (23.26)** | -0.343 (25.23)** | -0.338 (25.18)** | -0.227 (20.46)** | -0.192 (18.53)** |
| Male | -0.082 (8.87)** | -0.173 (23.42)** | -0.124 (16.96)** | -0.1 (13.23)** | -0.112 (14.16)** | -0.078 (9.88)** | -0.127 (15.44)** | -0.161 (19.42)** | -0.102 (12.16)** |
| Test type: Logramos [^] | 0.13 (8.06)** | 0.178 (16.30)** | 0.204 (18.62)** | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| Test Year: 2004 | -0.008 (0.60) | 0.044 (3.76)** | 0.02 (1.74) | -0.007 (0.56) | 0.028 (2.22)* | 0.006 (0.51) | 0.025 (1.99)* | 0.005 (0.35) | -0.002 (0.18) |
| Test Year: 2005 | -0.027 (2.07)* | 0.027 (2.33)* | 0.058 (4.98)** | 0.005 (0.45) | -0.023 (1.85) | 0.016 (1.27) | 0.027 (2.07)* | 0.026 (2.02)* | 0.011 (0.85) |
| Test Year: 2006 | -0.067 (3.61)** | -0.015 (1.25) | 0.018 (1.61) | 0.036 (3.04)** | 0.02 (1.63) | 0.04 (3.22)** | -0.017 (1.26) | 0.021 (1.62) | 0.022 (1.62) |
| Test Year: 2007 | -0.07 (4.02)** | -0.08 (6.88)** | -0.021 (1.85) | 0.021 (1.79) | 0.083 (6.64)** | 0.059 (4.67)** | 0.038 (2.93)** | 0.018 (1.37) | 0.044 (3.33)** |
| Constant | 0.279 (11.41)** | 0.758 (40.23)** | 0.987 (52.64)** | 0.887 (46.20)** | 0.917 (46.10)** | 0.876 (44.53)** | 0.863 (43.25)** | 0.923 (46.79)** | 0.875 (44.65)** |
| Observations | 45,893 | 64,546 | 62,526 | 59,069 | 54,112 | 53,315 | 49,737 | 47,293 | 46,771 |
| R-squared | 0.03 | 0.13 | 0.17 | 0.16 | 0.15 | 0.17 | 0.16 | 0.2 | 0.19 |

Absolute value of t-statistics in parentheses

** significant at 5% level; ** significant at 1% level*

[^]Logramos, an assessment in Spanish, is only offered in grades K - 2

Predicted Probability of Retention, LEP and Special Education by EFS Participation

| | Retained | Retained, Fixed Effect by Campus | Classified LEP | LEP, Fixed Effect by Campus | Referral to Special Education | Special Ed, Fixed Effect by Campus |
|-----------------------------|----------|--|-------------------|-----------------------------------|-------------------------------------|--|
| EFS | -0.065 | -0.065 | -0.121 | -0.121 | 0.107 | 0.107 |
| | 0.05 | 0.053 | 0.016*** | 0.053* | 0.023*** | 0.056 |
| Retained in Grade | | | 0.509 | 0.509 | 0.258 | 0.258 |
| | | | 0.006*** | 0.021*** | 0.007*** | 0.018*** |
| Limited English Proficiency | 0.288 | 0.288 | | | 0.185 | 0.185 |
| | 0.013*** | 0.021*** | | | 0.007*** | 0.025*** |
| Special Education | 0.025 | 0.025 | 0.252 | 0.252 | | |
| | 0.022 | 0.029 | 0.009*** | 0.034*** | | |
| Native American | 0.093 | 0.093 | 0.344 | 0.344 | -0.135 | -0.135 |
| | 0.092 | 0.104 | 0.043*** | 0.111** | 0.041*** | 0.076 |
| Asian | -0.469 | -0.469 | 1.29 | 1.29 | -0.667 | -0.667 |
| | 0.070*** | 0.084*** | 0.020*** | 0.099*** | 0.032*** | 0.074*** |
| African American | 0.093 | 0.093 | -0.779 | -0.779 | -0.315 | -0.315 |
| | 0.025*** | 0.048 | 0.017*** | 0.075*** | 0.010*** | 0.033*** |
| Latin | 0.039 | 0.039 | 1.598 | 1.598 | -0.494 | -0.494 |
| | 0.025 | 0.047 | 0.014*** | 0.077*** | 0.010*** | 0.033*** |
| Economically Disadvantaged | 0.297 | 0.297 | 0.634 | 0.634 | 0.012 | 0.012 |
| | 0.018*** | 0.030*** | 0.007*** | 0.033*** | 0.008 | 0.021 |
| Male | 0.218 | 0.218 | 0.032 | 0.032 | 0.355 | 0.355 |
| | 0.009*** | 0.010*** | 0.003*** | 0.008*** | 0.005*** | 0.010*** |
| Test type: Logramos^ | 0.182 | 0.182 | 2.049 | 2.049 | -0.263 | -0.263 |
| | 0.014*** | 0.023*** | 0.008*** | 0.042*** | 0.010*** | 0.023*** |
| Test Year: 2004 | 0.028 | 0.028 | -0.007 | -0.007 | -0.035 | -0.035 |
| | 0.013* | 0.018 | 0.005 | 0.016 | 0.008*** | 0.012** |
| Test Year: 2005 | -0.15 | -0.15 | -0.12 | -0.12 | 0.006 | 0.006 |
| | 0.015*** | 0.022*** | 0.005*** | 0.021*** | 0.008 | 0.015 |
| Test Year: 2006 | -0.626 | -0.626 | -0.191 | -0.191 | -0.016 | -0.016 |
| | 0.019*** | 0.031*** | 0.005*** | 0.028*** | 0.008* | 0.013 |
| Test Year: 2007 | -1.197 | -1.197 | -0.144 | -0.144 | -0.047 | -0.047 |
| | 0.035*** | 0.048*** | 0.005*** | 0.026*** | 0.008*** | 0.016** |
| Constant | -1.959 | -1.959 | -2.424 | -2.424 | -1.659 | -1.659 |
| | 0.025*** | 0.048*** | 0.015*** | 0.081*** | 0.011*** | 0.031*** |
| Observations | 185,363 | 185,363 | 944,992 | 944,992 | 944,992 | 944,992 |
| Pseudo R-squared | 0.059 | 0.059 | 0.378 | 0.378 | 0.034 | 0.034 |

*significant at $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Predicted Probability of Retention, LEP and Special Education by EFS Certification

| | Retained, Retained | Retained, Fixed Effect by Campus | Classified LEP | LEP, Fixed Effect by Campus | Referral to Special Ed | Special Ed, Fixed Effect by Campus |
|-----------------------------|-----------------------|--|-------------------|-----------------------------------|---------------------------|--|
| EFS | 0.206 | 0.206 | -0.384 | -0.384 | 0.039 | 0.039 |
| | 0.098* | 0.089* | 0.083*** | 0.21 | 0.052 | 0.095 |
| EFS: Step 3 & 4 | -0.355 | -0.355 | 0.273 | 0.273 | 0.086 | 0.086 |
| | 0.114** | 0.108*** | 0.084** | 0.22 | 0.058 | 0.116 |
| Retained in Grade | | | 0.509 | 0.509 | 0.258 | 0.258 |
| | | | 0.006*** | 0.021*** | 0.007*** | 0.018*** |
| Limited English Proficiency | 0.288 | 0.288 | | | 0.185 | 0.185 |
| | 0.013*** | 0.021*** | | | 0.007*** | 0.025*** |
| Special Education | 0.025 | 0.025 | 0.251 | 0.251 | | |
| | 0.022 | 0.029 | 0.009*** | 0.034*** | | |
| Native American | 0.094 | 0.094 | 0.344 | 0.344 | -0.135 | -0.135 |
| | 0.092 | 0.104 | 0.043*** | 0.111** | 0.041*** | 0.076 |
| Asian | -0.468 | -0.468 | 1.289 | 1.289 | -0.667 | -0.667 |
| | 0.070*** | 0.084** | 0.020*** | 0.099*** | 0.032*** | 0.074*** |
| African American | 0.092 | 0.092 | -0.778 | -0.778 | -0.315 | -0.315 |
| | 0.025*** | 0.048 | 0.017*** | 0.075*** | 0.010*** | 0.033*** |
| Latin | 0.04 | 0.04 | 1.597 | 1.597 | -0.494 | -0.494 |
| | 0.025 | 0.047 | 0.014*** | 0.077*** | 0.010*** | 0.033*** |
| Economically Disadvantaged | 0.297 | 0.297 | 0.634 | 0.634 | 0.012 | 0.012 |
| | 0.018*** | 0.030*** | 0.007*** | 0.033*** | 0.008 | 0.021 |
| Male | 0.218 | 0.218 | 0.032 | 0.032 | 0.355 | 0.355 |
| | 0.009*** | 0.010*** | 0.003*** | 0.008*** | 0.005*** | 0.010*** |
| Test type: Logramos^ | 0.182 | 0.182 | 2.05 | 2.05 | -0.263 | -0.263 |
| | 0.014*** | 0.023*** | 0.008*** | 0.042*** | 0.010*** | 0.023*** |
| Test Year: 2004 | 0.028 | 0.028 | -0.007 | -0.007 | -0.035 | -0.035 |
| | 0.013* | 0.018 | 0.005 | 0.016 | 0.008*** | 0.012** |
| Test Year: 2005 | -0.15 | -0.15 | -0.12 | -0.12 | 0.006 | 0.006 |
| | 0.015*** | 0.022*** | 0.005*** | 0.021*** | 0.008 | 0.015 |
| Test Year: 2006 | -0.627 | -0.627 | -0.19 | -0.19 | -0.016 | -0.016 |
| | 0.019*** | 0.031*** | 0.005*** | 0.028*** | 0.008* | 0.013 |
| Test Year: 2007 | -1.198 | -1.198 | -0.144 | -0.144 | -0.047 | -0.047 |
| | 0.035*** | 0.048*** | 0.005*** | 0.026*** | 0.008*** | 0.016** |
| Constant | -1.959 | -1.959 | -2.424 | -2.424 | -1.659 | -1.659 |
| | 0.025*** | 0.048*** | 0.015*** | 0.081*** | 0.011*** | 0.031*** |
| Observations | 185,363 | 185,363 | 944,992 | 944,992 | 944,992 | 944,992 |
| Pseudo R-squared | 0.059 | 0.059 | 0.378 | 0.378 | 0.034 | 0.034 |

*significant at $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Appendix B

EFS STEP CRITERIA

For 18 years EFS has partnered with existing childcare and preschool centers, working to provide the ingredients needed to help children overcome the barriers of poverty using our “Four Steps to Excellence” approach:

Step 1: “Probation” - This step lasts for up to 6 months. All centers enter the EFS program on Step 1. Training and weekly mentoring from EFS is given.

Step 2: “Working Toward Excellence” - Centers in this step are working to improve quality to the standards of national accreditation. Training and weekly mentoring from EFS is given. Scholarships and materials are provided.

Step 3: “Maintaining Accreditation Standards” - This is a one year period following accreditation. Regular support from EFS continues during this step.

Step 4: “Community Partner” - Centers in this step have reached accreditation or maintain a quality equal to accreditation. Support from EFS is given on an as-needed basis.