

**MEMORANDUM**

December 9, 2015

TO: Board Members

FROM: Terry B. Grier, Ed.D.  
Superintendent of Schools

SUBJECT: **HIPPY PROGRAM EVALUATION REPORT**

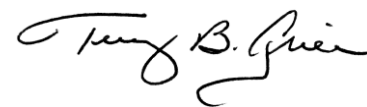
CONTACT: Carla Stevens, 713-556-6700

Attached is the 2014–2015 evaluation report on the Home Instruction of Parents with Preschool Youngsters (HIPPY) Program. HIPPY is a school readiness program that helps parents prepare their preschool children for academic success. A total of 730 students and their parents participated in the Houston Independent School District (HISD) HIPPY program during the 2014–2015 academic year compared to 577 students in the previous year. HIPPY program sites expanded from 34 schools to 40 schools over the past two years. The current impact of the program was measured using reading and mathematics subtests on the 2015 Logramos and STAAR.

Key findings include:

- The 2009–2010 through 2011–2012 HISD HIPPY cohorts attained higher mean reading (ELA Total) and mathematics (Math Total) scores on the Logramos compared to HISD students. This trend was noted at third and fourth grades for the 2009–2010 cohort; second, third, and fourth-grades for the 2010–2011 cohort; as well as first, second, and third grades for the 2011–2012 cohort.
- On the English STAAR, the district average scale score was higher than the 2009–2010 cohort score by 12 points at fourth grade, increasing to 37 points at fifth grade. Comparatively, on the Spanish STAAR reading test, the 2009–2010 cohort outperformed the district at third and fourth grades.
- On the English STAAR mathematics test, the mean scale scores of the cohort exceeded the mean scale scores of students districtwide at third, fourth, and fifth grades. The HIPPY cohort also outperformed students districtwide on the Spanish STAAR mathematics test at third and fourth grades.

Should you have any further questions, please contact Carla Stevens in Research and Accountability at 713-556-6700.

  
\_\_\_\_\_TBG

Attachment

cc: Superintendent's Direct Reports  
Jorge Arredondo  
Maria Gabriella Hernandez



# RESEARCH

Educational Program Report

HOME INSTRUCTION FOR PARENTS OF  
PRESCHOOL YOUNGSTERS (HIPPY), 2014-2015



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# HOME INSTRUCTION FOR PARENTS OF PRESCHOOL YOUNGSTERS (HIPPY), 2014–2015

## Executive Summary

Home Instruction for Parents of Preschool Youngsters (HIPPY) was established more than 40 years ago in over 10 countries globally (Texas HIPPY Center, 2015). HIPPY was initiated in the Houston Independent School District (HISD) during the 1993–1994 school year to offer academic enrichment opportunities to parents and children from economically-disadvantaged backgrounds. The program is considered an effective educational practice that promotes school readiness and removes barriers for poverty-stricken children who are at risk of academic failure (Zuckerman and Halfon, 2003; Texas HIPPY Center, 2015). HIPPY provides an opportunity for early childhood experiences that are “consistent, developmentally sound, and emotionally supportive” for the child and the family (High, 2008, p. 1008). This model of early education supports the governor of Texas’ priority for building a better education system for all children (The State of Texas, 2015).

HIPPY utilizes a home-based, family-focused approach to help parents prepare their children for academic success prior to enrolling in school (Texas HIPPY Center, 2015). HIPPY USA provides technical assistance to participating school districts. Targeted parents have preschool children ages three to five years old. HIPPY lessons are delivered by home instructors who are active parents from the community. These instructors are trained to cover a highly-structured, 30-week curriculum in English and Spanish for an hour every week in the parents' home. Home instructors engage in role play to teach parents educational activities which they can practice with their children. Parents are encouraged to help their children recognize shapes and colors, tell stories, follow directions, solve logical problems, and acquire other school readiness skills. During the 2014–2015 academic year, HISD expanded HIPPY to reach students and parents in more geographic locations. Consistent with HIPPY objectives, this evaluation addressed the following areas:

- Longitudinal participation trends,
- Academic enrichment activities,
- 2015 Logramos reading and mathematics performance of the 2009–2010 through 2011–2012 HISD HIPPY cohorts, and
- 2015 STAAR reading and mathematics results for the 2009–2010 HISD HIPPY cohort.

A limitation of this evaluation is that the cohort samples selected for Logramos and STAAR performance analyses were only those with sufficient numbers of HISD HIPPY elementary school students to compare with students in the district. These cohorts allowed for analyses of the delayed academic effects of HIPPY.

### Highlights

- During the 2014–2015 academic year, HIPPY operated in 40 HISD elementary schools, across seven of the nine HISD Board of Trustee districts. Staff resources included three program coordinators, one assistant, and 43 home instructors. The HISD HIPPY budget allocation was \$760,000, which was an increase of \$10,143 from the previous school year, and more than double from the 2012–2013 academic year allocation.
- A total of 730 three to five-year old children, along with their parents, participated in the HISD HIPPY program during the 2014–2015 academic year. Among the 730 children, 198 of them were identified as HISD students in the 2014–2015 Public Education Information Management System (PEIMS). A

higher percentage of the HISD HIPPY students were female (54.0 percent) compared to male and Hispanic (80.3 percent) compared to other ethnic groups. Additionally, 71.7 percent of the students were identified as limited English proficient (LEP), 98.0 percent as at-risk of dropping out of school, and 95.5 percent were economically disadvantaged.

- Over the past five years, the ethnic composition of HIPPY HISD student cohorts has fluctuated. Among the notable trends was a decrease in the proportion of Hispanic students by 13.7 percent from 2012–2013 to 2013–2014, with a 12.8 percent increase in Hispanic students during the 2014–2015 school year. The percentage of African American students nearly tripled from the 2012–2013 (8.1 percent) to the 2013–2014 school year (23.3 percent), but dropped by 5.6 percentage points from the 2013–2014 to the 2014–2015 school year (17.7 percent). The percentage of Asian students increased from zero in 2012–2013 to 2.0 percent of the cohort in 2014–2015.
- In addition to home instruction lessons, 1,470 HISD HIPPY parents, students, and families participated in the *End of Year HIPPY Celebrations* enrichment activity during the 2014–2015 school year. The activity supported parental involvement and leadership skill development.
- A higher mean standard score was achieved by the 2009–2010 HISD HIPPY cohort compared to HISD students at third and fourth grade on the 2015 Logramos reading (ELA Total) and mathematics assessments (Math Total). The largest difference was between HISD HIPPY cohorts and students districtwide was at fourth-grade in reading by 2.5 points; and at third grade in mathematics by 1.7 points.
- The 2010–2011 HISD HIPPY student cohort outperformed the District on both reading and mathematics Logramos assessments. The largest difference between HISD HIPPY and HISD students districtwide was at fourth grade in reading and second grade in mathematics (8.9 and 5.8 points, respectively).
- For the 2011–2012 HISD HIPPY cohort, first- and second-grade student performance exceeded the District by 5.6 and 5.1 points in reading, respectively; and by 7.0 and 8.1 points in mathematics at the respective grade levels. While the mean third-grade reading and mathematics performance was also higher for HISD HIPPY students than the District, the difference was consistently much lower than at the higher grade levels at 1.6 points in mathematics and 1.9 points in reading.
- The 2009–2010 HISD HIPPY cohort was used to measure student performance on the STAAR as this group had sufficient numbers of students to make a fairly reliable comparison, and to demonstrate program effects over time. The mean scale score on the English STAAR reading test of the 2009–2010 HISD HIPPY cohort was higher than the District by 10 points at third grade. However, the district average scale score was higher than this HIPPY cohort by 12 points at fourth grade, increasing to 37 points at fifth grade. The 2009–2010 HISD HIPPY cohort outperformed the District on the Spanish reading STAAR at third and fourth grades by 24 and 38 scale-score points, respectively. Differences between the groups were not statistically significant at  $p < .05$ .
- On the English STAAR mathematics test, the mean scale scores of the 2009–2010 HISD HIPPY cohort exceeded the mean scale scores of students districtwide at third, fourth, and fifth grades by 15, 22, and 29 scale-score points, respectively. Comparatively, on the Spanish STAAR mathematics test, the cohort attained higher mean scale scores than students districtwide at third and fourth grades by 29 and 30, respectively.

- Using non-HISD HIPPY third, fourth, and fifth-grade students as comparison groups, effect size analyses (Hedges'  $g$ ) revealed the magnitude of the effect of the HISD HIPPY program based on the STAAR English and Spanish reading and mathematics tests. Small effects of the program were identified among fourth-grade students in the 2009–2010 cohort on the Spanish STAAR reading test. The difference between the means of the HISD HIPPY cohort and the HISD student sample was .22 standard deviations. In addition, small effects of the program were identified among third and fourth-grade students on the Spanish STAAR mathematics test as well as among fifth-grade students on the English STAAR mathematics test. The differences between the means of the HISD HIPPY cohort and the HISD student sample at third and fourth grades were .21 standard deviations at both grade levels, and .20 standard deviations at fifth grade.

## Recommendations

1. In this report, positive differences were noted in the academic achievement of HISD HIPPY cohorts compared to students districtwide, particularly on Spanish language assessments. This finding was inconsistent among students on English language assessments. HISD should continue to support the HIPPY program to develop the academic potential of targeted students. Additional strategies designed to build on students' academic performance in English should be considered. Strategies include linking HIPPY parents to Family and Community Engagement (FACE) resources and providing follow-up services to HIPPY parents after exiting the program. Expanding the number of hours worked by part-time HIPPY instructors to work with HIPPY parents after their children exit the program may help to implement these strategies.
2. The HISD HIPPY program facilitates school readiness and literacy development in preschool children. HISD should consider expanding the HIPPY program to additional elementary school sites to address the literacy needs of more economically-disadvantaged students across the district. Recruitment efforts should focus on students of all ethnic backgrounds to augment their educational and academic experiences through parental involvement and support offered by HIPPY.

## Administrative Response

During the 2015–2016 school year, 57 HISD schools will participate in the HIPPY program. As a result, parent recruitment and retention, and student cognitive development at these sites are expected to increase. The goal for 2015–2016 school year is to serve 572 HISD families and 704 students. HIPPY received \$5,880,967 from a Texas Home Visiting Program Grant to expand services to our families in Sunnyside, Third Ward, and South Side. It is expected that HIPPY cohort children will continue to outperform their HISD peers.

Given that academic performance benefits have been found for HIPPY students, the program administration will continue to work to provide quality program activities and maintain alignment with national HIPPY standards.

## Introduction

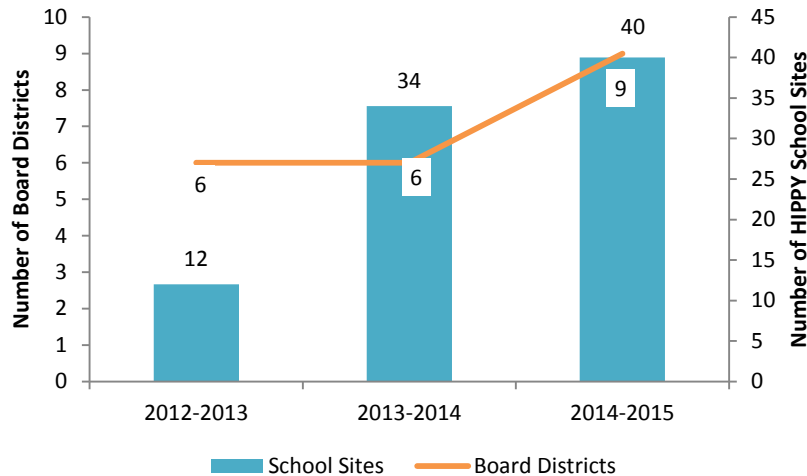
Home Instruction for Parents of Preschool Youngsters (HIPPY) offers educational enrichment opportunities to parents and children from disadvantaged backgrounds in the Houston Independent School District (HISD). HIPPY utilizes a home-based, family-focused model to help parents prepare their children for academic success prior to enrolling in school. HIPPY USA supports HIPPY programs nationwide by offering technical assistance. HIPPY promotes school readiness and early literacy by creating an environment that supports parents in their role as the child's first teacher. By providing a curriculum with activities for preschool children, HIPPY offers practice in skills that research has proven crucial to school readiness so that children entering school are prepared to learn and achieve better academic, social, economic, and health outcomes (Zuckerman and Halfon, 2003; Texas HIPPY Center, 2015). The HIPPY curriculum is designed with the intention that parents from disadvantaged backgrounds (i.e., those with limited or unsuccessful schooling, and/or limited financial resources) can be successful teachers of their own children. Parents are empowered to understand what their child is learning and to support their child's future learning.

Targeted HIPPY parents have preschool children ages three to five years old and reside within HISD geographical boundaries. For HIPPY children, the model supports the development of basic academic readiness concepts and skills, values and attitudes, concentration, confidence, successful transition from the home to school environment, empathy toward others, and positive relationships with parents (Texas HIPPY Center, 2015). Moreover, program participation is designed to generate the following outcomes:

- Parents with an enhanced sense of their own abilities and the satisfaction of teaching their children.
- Children with an opportunity for both fun and learning with their parents at home.
- Families with the support and guidance of trained peer home visitors and a professional coordinator.
- Schools with children who enter school ready to succeed and parents who are active and supportive.
- Home Instructors with a means of assuming leadership in the community and steps toward self-sufficiency and marketable skills (Texas HIPPY Center, 2015).

The HIPPY program was first implemented in HISD by the Early Childhood Department as a pilot program during the 1993–1994 academic school year. During the 2013–2014 academic year, HIPPY was funded through the HISD Family and Community Engagement Department (FACE), which oversees parent-related activities. HIPPY has expanded over the years to reach more parents whose children may enroll in HISD schools. **Figure 1** shows that, during the 2012–2013 academic year, HIPPY operated in 12 HISD elementary schools, covering six Board of Trustee Districts. HIPPY was staffed by one coordinator at that time. During the 2013–2014 academic year, HIPPY operated at 34 elementary schools, covering six of the nine HISD Board Districts, and was staffed by two coordinators and 35 home instructors. Finally, in 2014–2015, HIPPY operated in 40 targeted elementary schools, staffed with three coordinators, one assistant, one lead specialist, and 43 home instructors. The names of the HIPPY primary school sites over the past two years are presented in **Appendix A** (p. 20). A map of HIPPY's geographical locations in 2014–2015 follows Appendix A. The map reflects primary HIPPY school sites as well as schools where the siblings of HIPPY 3-5 year children attended. HIPPY program staff may have the need to link siblings to neighboring schools.

**Figure 1. Number of HISD HIPPY School Sites and Board Districts, 2012–2013 to 2014–2015**



### The HIPPY Model

The HIPPY program model uses the following strategies: (1) the use of a developmentally-appropriate 30-week curriculum in English or Spanish; (2) the use of role-play as the method of teaching, staffed by part-time home instructors, and supervised by a coordinator; (3) and the use of home visits combined with group meetings to provide parents with the tools and materials that enable them to work directly and effectively with their child (HIPPY USA, n.d.). A typical HIPPY program site can serve up to 180 children and their families, with one coordinator and 12 to 18 part-time home instructors.

### The HIPPY Curriculum

HIPPY instructional materials are standardized and include story books, weekly activity packets, and manipulatives. There are 30 activity packets for use throughout the school year. A packet for each week includes approximately 10 activities for parents and children. These activity packets include language development, sensory and perception discrimination skills, and problem solving. The materials are available in both Spanish and English and are designed to enable parents with little or no formal schooling to teach their children successfully.

### Home Instructors and Program Coordinator

A typical home instructor provides services to up to 15 parents with children. The home instructor’s main responsibility is to deliver the curriculum to his/her assigned parents. As such, home instructors are required to schedule their own appointments and meet with their assigned parents at the parent’s home once a week for a period of 30 weeks. During a home visit, home instructors provide parents with a packet containing the week’s activities. The home instructor engages in role-play with the parents, often using his or her own child. However, the home instructor does not work directly with the child participant.

Home instructors are part-time employees of HISD, and work approximately 20 hours a week. The recruitment procedure for home instructors required that they have (1) a child of appropriate age to



engage in the HIPPY curriculum, (2) a Graduation Equivalent Diploma (GED), (3) a valid Texas Drivers License, (4) transportation, and (5) a valid permit to work in the United States. The home instructors receive weekly HIPPY training conducted by a full-time HIPPY coordinator. The program coordinator recruits and trains home instructors, organizes group meetings, develops enrichment activities, and helps to recruit parents into the program. All home instructors are parents of preschoolers and/or have young children attending the school to which they are assigned.

### Staff and Group Meetings

Staff meetings provide home instructors with practice of the week's activities. These meetings allow home instructors to review and practice the role-playing lesson as it will be taught to the parent. Furthermore, home instructors learn from other home instructors and the coordinator about circumstances and situations that may arise while they are training parents. Group meetings are designed to network parents of HIPPY children to discuss information and provide parents a time to ask questions. These meetings often provide valuable information of available services on local resources that may potentially benefit the families of HIPPY children. In addition, group meetings allow parents an opportunity to meet with other program participants, to share and learn from each other's experiences, and to receive additional support and information from the community.

### HIPPY Advisory Board

During the 2014–2015 academic, the Houston HIPPY had a 13-member Advisory Board, consisting of principals, a Board member, community members, and parents. This was an increase from a six-member HIPPY Advisory Board the previous year. The Advisory Board was developed to help parents achieve expected outcomes related to teaching and learning for their child and themselves in the areas of literacy, self-concept, and interactions in their families, schools, and the community. Additional responsibilities of the HIPPY Advisory Board are to promote HIPPY in the community; assist in the procurement of funds; provide advice regarding planning, implementation, and problem solving; assist with program needs (e.g., special events, guest speakers); and foster cooperative working relationships with resource agencies, community and volunteer groups, and other early childhood/family support programs.

## Review of Literature

Over the years, continuous efforts have been made by educators, internationally, to prepare children to be successful in school. The role of parents toward strengthening the academic achievement of their child has long been recognized as key to successful early childhood education programs and building school readiness skills (Hidalgo, Kallemeyn, & Phillips, 2013). The significance of parents in early childhood education is further emphasized in the Family Engagement in Education Act of 2011. The ACT notes that “positive benefits for children, youth, families, and schools are maximized through effective family engagement that is continuous across a child’s life from birth through young adulthood” (Family Engagement in Education Act of 2011, Section 3). The research points out that when parents are involved, students have higher grades, test scores, attend school on a regular basis, are more motivated, have higher levels of self-esteem, have lower rates of suspension, and show improved behavior at home and school (Henderson & Mapp, 2002). Hidalgo, Kallemeyn, and Phillips (2013) highlight research on the positive relationship between parental involvement, children’s brain development, and school readiness.

There were strong indicators that the most effective forms of involvement are those that engage parents by working directly with their children on learning activities in the home (Henderson & Mapp, 2002). The research also shows that the earlier in a child's educational process parent engagement begins; the more powerful the effects (Kagiticbasi, Sunar, & Bekman, 2001). Early childhood programs with strong parental involvement components have demonstrated effectiveness by applying this approach (Jordan, Snow, & Porche, 2000; Mathematica Policy Research, 2001; Starkey & Klein, 2000).

Over the years, numerous studies have been conducted on HIPPY programs across the United States. Many of these studies involved assessing children's academic outcomes as they entered school. A third-grade follow-up study conducted in Texas showed significantly higher mathematics achievement of HIPPY children compared to low-income Latino third graders in the same school district (Nievar, Jacobson, Chen, Johnson, and Dier, 2011, p. 268). In Arkansas, a modest positive impact on school suspensions, grades, classroom behavior, and achievement test scores were noted for third and sixth-grade students enrolled in the same classrooms, controlling for preschool experiences (Bradley and Gilkey, 2002). Another study examined the impact of the HIPPY program in a New York school district (Baker, Piotrkowski, and Brooks-Gunn, 1998). The study followed two cohorts of HIPPY program participants and control-group children over a two-year period, from kindergarten through first grade. In the first cohort, researchers found that HIPPY children outperformed control-group children on measures of cognitive skills at the end of kindergarten, on measures of classroom adaptation at the beginning of the first and second grades, and on a standardized reading test at the end of first grade. However, in the second cohort, the researchers found no significant differences between HIPPY and control-group students.

## Methods

### Data Collection and Analysis

- Student enrollment, demographic characteristics, and academic performance data for the evaluation were obtained using a variety of sources. First, an electronic database of three to five-year old children who participated in HISD HIPPY during the 2014–2015 academic year was acquired from HISD HIPPY administrative staff. Next, HISD student enrollment was verified using the Public Education Information Management System (PEIMS). Data on children who were verified as HISD students based on PEIMS were used in this analysis to form the 2014–2015 HISD HIPPY student cohort. Identification of the 2009–2010 through 2013–2014 cohorts were obtained from archival data files, which were provided by HIPPY program administrators. Demographic characteristics of the cohorts were presented for the year of initial involvement in HISD HIPPY to show longitudinal trends.
- Given the small number of elementary students (less than five) who took the Iowa, an English assessment, in spring 2015, the reading (ELA Total) and mathematics (Math Total) assessment results were reported for students who took comparable Logramos assessments. Students who were classified as English language learners (ELL) in kindergarten to eighth grade and received reading and language arts instruction in Spanish were administered Logramos.
- Academic performance analyses included Logramos results for students in the 2009–2010, 2010–2011, and 2011–2012 HISD HIPPY cohorts because there were sufficient numbers of students tested at elementary grade levels to make performance comparisons. Performance comparisons were made using standard scores. Riverside Publishing (1999) indicates that “the term scale score and standard

score are often used interchangeably, even though these scores may be derived at by different methods, their purpose and use can be similar” (p. 31). In this report, the standard score was used as a continuous measure, like the scale score, that permits direct comparisons of different groups.

- Additional academic performance analyses were conducted using the first administration of the 2015 English and Spanish reading and mathematics STAAR. Mean scale scores of the 2009–2010 HISD HIPPY cohort were compared to district students at the same grade levels. This cohort was used because there was sufficient test data to conduct the analyses. STAAR scale scores allow direct comparisons of student performance between specific sets of test questions from different test administrations (Texas Education Agency, 2014).
- Using IBM SPSS software, the independent samples t-test was conducted to determine whether there were statistically significant differences between the scale score performance of the 2009–2010 HISD HIPPY cohort and non-HISD HIPPY students at comparable grades levels on the 2015 English and Spanish STAAR reading and mathematics tests. The level of statistical significance was  $p < .05$  level.
- Effect size analyses, based on Hedges’  $g$ , were conducted using the first administration of the 2015 STAAR reading and mathematics assessments results of the 2009–2010 HISD HIPPY cohort and non-HISD HIPPY students at comparable grades levels whose parents did not participate in HIPPY during the cohort year. The Hedges’  $g$  has been adopted by the What Work’s Clearinghouse (WWC) as the most commonly used effect size index for continuous outcomes (What Works Clearinghouse, n.d.) The Hedges’  $g$  is the standardized mean differences between the mean outcome for the intervention group and the mean outcome for the comparison group, divided by the pooled within-group standard deviation of the outcome measure. Interpretation of Hedges’  $g$  is:  $.2 =$  small effect;  $.5 =$  medium effect, and  $.8 =$  large effect (Cohen, 1988). According to the What Works Clearinghouse (n.d.), effect sizes of 0.25 standard deviations or larger are considered to be substantively important. Effect sizes at least this large are interpreted as a qualified positive (or negative) effect, even though they may not reach statistical significance in a given study.

## Results

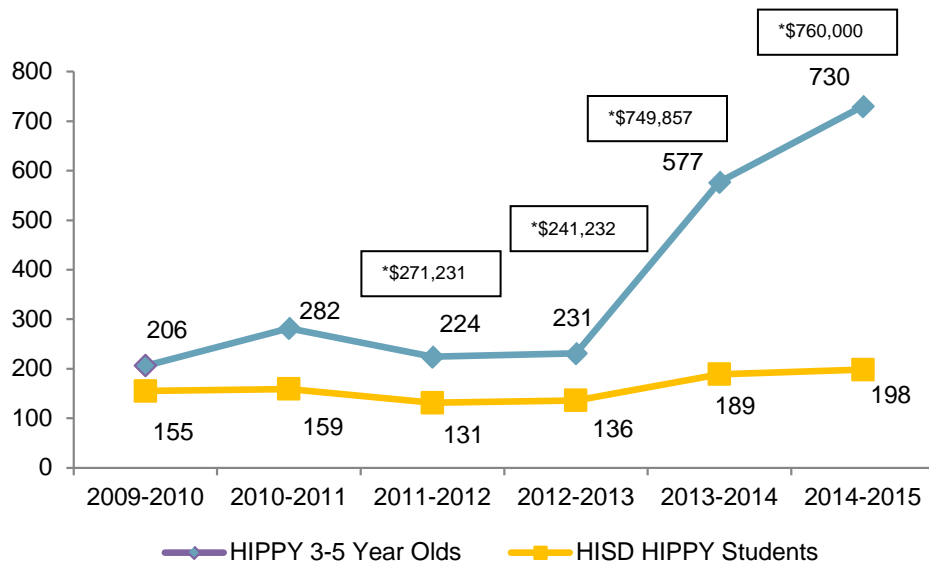
### What were the participation trends of HISD HIPPY children over the past six years (2009–2010 through 2014–2015)?

**Figure 2** reflects the total number of three to five-year old children who participated in HISD HIPPY over the past six years. In addition, Figure 2 depicts HIPPY students who were enrolled in HISD elementary schools during the designated academic years while their parents participated in the program. Budget allocations for the 2011–2012 to the 2014–2015 academic years are also presented in Figure 2.

- A total of 730 three to five-year old children, along with their parents, participated in the HISD HIPPY program during the 2014–2015 academic year. Among the 730 children, 198 of them were identified as HISD students in the 2014–2015 Public Education Information Management System (PEIMS).
- The number of three to five-year old children who participated in HISD HIPPY fluctuated moderately from 2009–2010 to 2012–2013. However, participation more than doubled over the subsequent two years, reaching highest participation in 2014–2015 with 730 children.

- **Appendix B** (p. 21) shows that a higher percentage of the HISD HIPPY students were female than male (54.0 percent) and Hispanic compared to other ethnic groups (80.3 percent) during the 2014–2015 academic year. Moreover, 71.7 percent of the students were identified as limited English proficient (LEP), 98.0 percent as at-risk of dropping out of school, and 95.5 percent were economically disadvantaged.
- Trends relative to LEP, economic, and at-risk status have been fairly consistent among the HISD HIPPY cohorts from 2009–2010 to 2014–2015. However, the ethnic composition of the cohorts has fluctuated over the years yielding higher proportions of African American students in 2013–2014 and Asian students in 2014–2015 (Appendix B, p. 21).
- Appendix B (p. 21) reflects notable trends in the ethnic composition of the HISD HIPPY cohorts. Specifically, there was a decrease in the proportion of Hispanic students by 13.7 percent from 2012–2013 to 2013–2014, with a 12.8 percent increase in this ethnic group during the 2014–2015 school year. The percentage of African American students nearly tripled from the 2012–2013 (8.1 percent) to the 2013–2014 school year (23.3 percent), but dropped by 5.6 percentage points by the 2014–2015 school year (17.7 percent). The percentage of Asian students increased from 0 percent of the total HISD HIPPY cohort in 2012–2013 to 2.0 percent of the cohort in 2014–2015.

**Figure 2. HISD HIPPY Participation, 2009–2010 through 2014–2015**



\*Annual Budget

Note: The HISD HIPPY student group are siblings of 3-5 year olds who attended HISD schools during the designated year.

- The HISD HIPPY budget allocation was \$760,000 during the 2014–2015 academic year, which was an increase of \$10,143 from the previous school year, and was more than three times greater than the 2012–2013 academic year (Figure 2). The National Counsel of Jewish Women donated 25 gas cards (\$625 value) and \$10,000 in cash, which is reflected in the 2014–2015

budget. The organization's donations to HISD HIPPY varied from the 2013–2014 academic year, which included \$1,000 in gas cards and \$5,000 in cash. Cash donations are used to purchase HIPPY curriculum materials and supplies as well as books for the summer extension program.

### **What enrichment activities were offered for HISD HIPPY participants during the 2014–2015 academic year?**

HISD HIPPY students and parents engaged in enrichment activities to complement home instruction lessons throughout the academic year. The activities were designed to encourage parents to be more involved in their child's learning and to develop leadership skills. During the 2013–2014, the HISD Family and Community Engagement Department sponsored four *End of Year HIPPY Celebrations* for over 1,500 HIPPY students, parents, and their families. The events were hosted at Stevenson Middle School as well as Barbara Jordan, Sam Houston, and DeBaKey high schools. During the 2014–2015 school year, *End of Year HIPPY Celebrations* were held at Hartman Middle School along with Austin, Reagan, and Sam Houston high schools. Approximately 1,470 students, parents, and families attended in 2014–2015. Guest speakers were HISD Board Member Manuel Rodriguez and HISD central office and school administrators. Principals and/or their representatives from HISD HIPPY schools acknowledged the achievements of parents and their children from respective campuses. Each HISD HIPPY child and parent was given a certificate for completing the 30-week curriculum. This annual event provided parents and their children with a sense of accomplishment for their hard work throughout the school year.

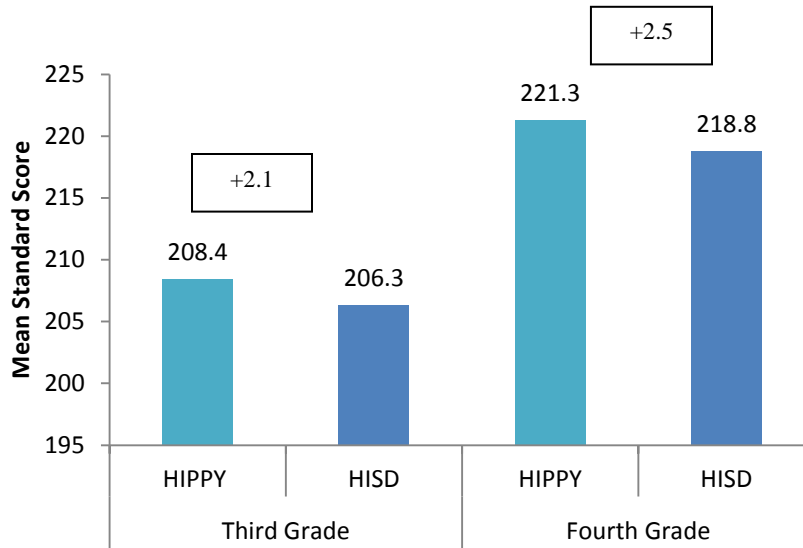
During the summer of 2015, HISD HIPPY conducted the HIPPY Summer Program in the children's homes. Families were provided a set of books (6 books) and bilingual material for them to continue reading during the summer. Backpacks were provided with funds donated by the National Council of Jewish Women. Free tickets were distributed to all HIPPY families from the Children's Museum of Houston.

### **How did HISD HIPPY student cohorts perform on the spring 2015 administration of the Logramos? (2009–2010, 2010–2011, 2011–2012, and 2012–2013 cohorts)**

**Figures 3** and **4** present the mean scale scores of the 2009–2010 HISD HIPPY student cohort compared to students districtwide at comparable grade levels on the 2015 Logramos reading (ELA Total) and mathematics (Math Total) assessments. Additional data on the cohort are included in **Appendix C**, p. 22. Test results of 30 HISD HIPPY third-grade students in reading and 28 students in mathematics are presented in Figures 3 and 4. In addition, the test results of 16 HISD HIPPY fourth-grade students in reading and mathematics are depicted in Figures 3 and 4.

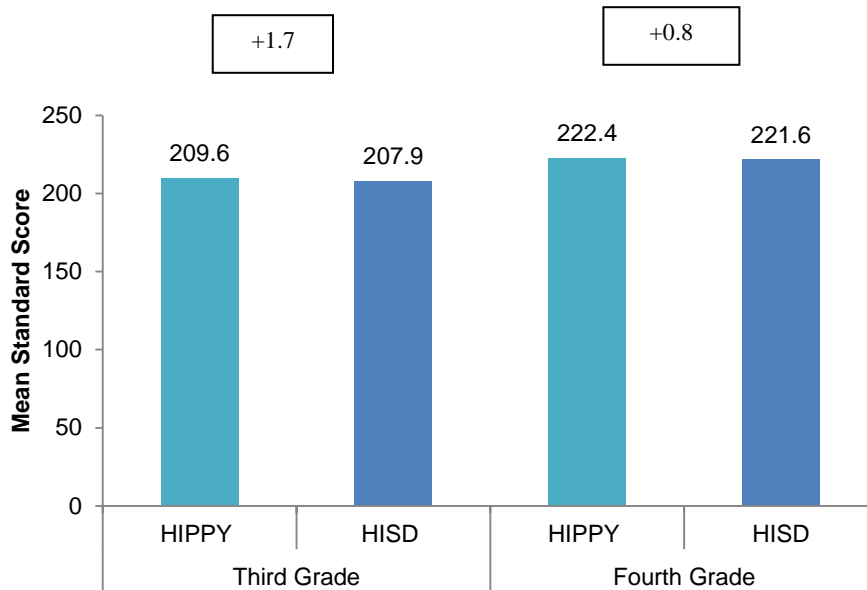
- Figure 3 shows a higher mean standard score for the 2009–2010 HISD HIPPY cohort compared to HISD students at comparable grade levels on the 2015 Logramos ELA assessment. The largest difference between HIPPY cohort students and HISD students was at fourth grade by 2.5 points.
- The 2009–2010 HISD HIPPY cohort outperformed the district on the Logramos mathematics assessment, with the largest difference between the groups noted at third grade by 1.7 points (Figure 4).

**Figure 3. 2015 Logramos Reading (ELA) Performance, 2009–2010 HISD HIPPY Cohort vs. HISD Students<sup>1</sup> at Comparable Grade Levels**



Note: Third grade (n = 30); Fourth grade (n = 16)

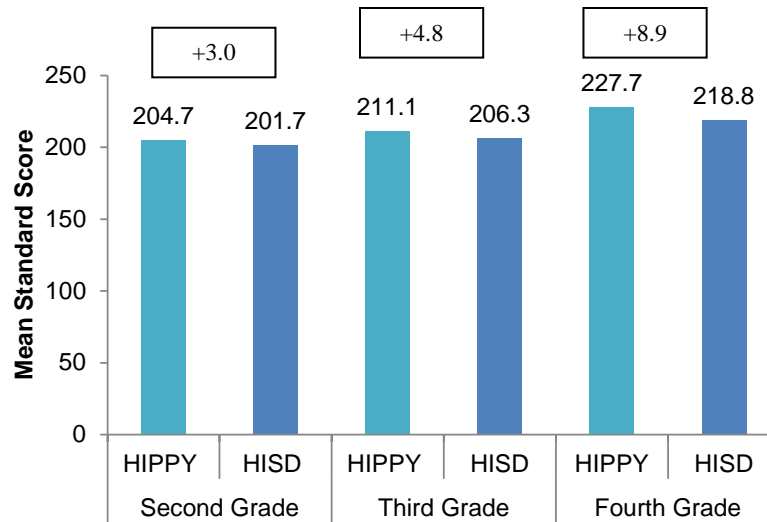
**Figure 4. 2015 Logramos Math Performance, 2009–2010 HISD HIPPY Cohort vs. HISD Students<sup>1</sup> at Comparable Grade Levels**



Note: Third grade (n = 30); Fourth grade (n = 16)

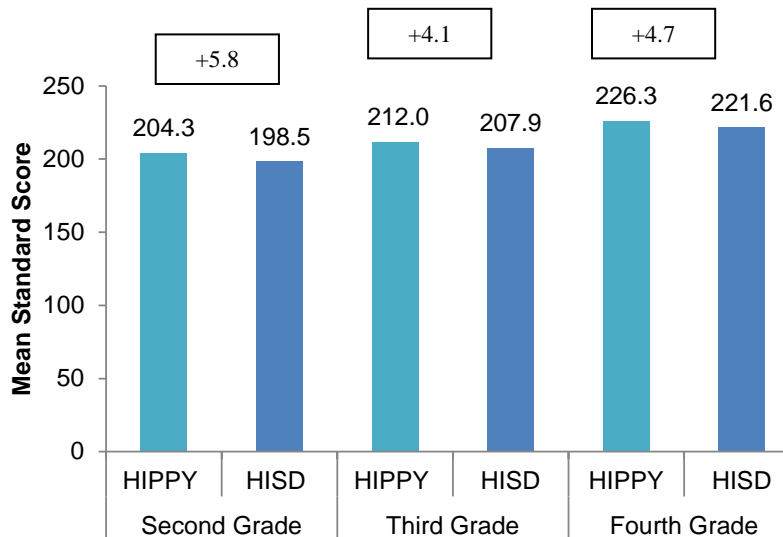
<sup>1</sup> HISD results were obtained from the Logramos<sup>®</sup> District Performance Profile, 2015.

**Figure 5. 2015 Logramos Reading (ELA) Performance, 2010–2011 HISD HIPPY Cohort vs. HISD Students<sup>2</sup> at Comparable Grade Levels**



Note: Second grade (n = 27); third grade (n = 43); fourth grade (n = 6)

**Figure 6. 2015 Logramos Math Performance, 2010–2011 HISD HIPPY Cohort vs. HISD Students<sup>2</sup> at Comparable Grade Levels**



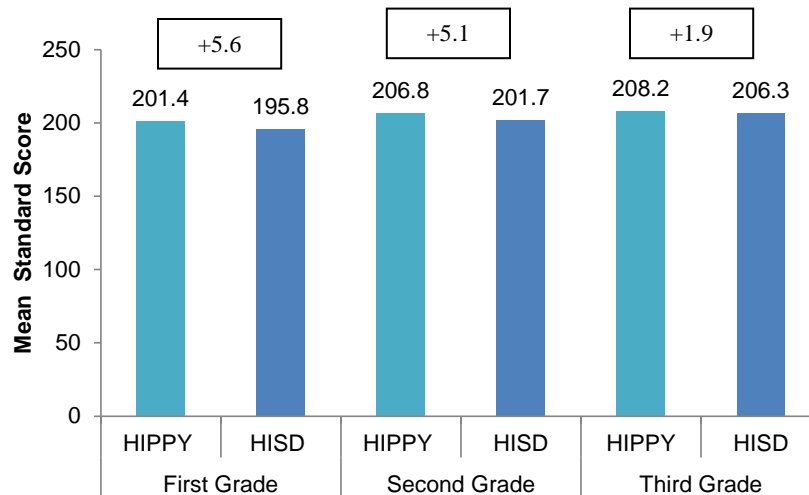
Note: Second grade (n = 27); third grade (n = 43); fourth grade (n = 6)

- The 2015 Logramos were analyzed for a total of 27 second-grade students in the 2010–2011 HISD HIPPY student cohort as well as 43 and 42 third-grade students on ELA and mathematics assessments, respectively (**Figures 5 and 6**). Test data for six fourth-grade HISD HIPPY students are also depicted in Figures 5 and 6. Additional data on the cohort are included in **Appendix D**, p. 23.

<sup>2</sup> HISD results were obtained from the Logramos<sup>®</sup> District Performance Profile, 2015.

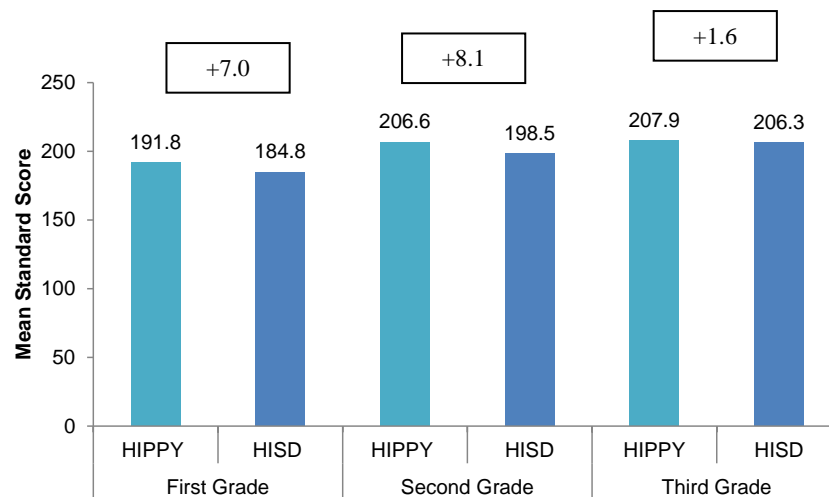
- The 2010–2011 HISD HIPPY student cohort outperformed the district on both reading and mathematics Logramos assessments. The largest difference between HIPPY and HISD students was at fourth grade in reading and second grade in mathematics (8.9 and 5.8 points on the respective tests).

**Figure 7. 2015 Logramos Reading (ELA) Performance, 2011–2012 HISD HIPPY Cohort vs. HISD Students<sup>3</sup> at Comparable Grade Levels**



Note: First grade (n = 29); third grade (n = 32); fourth grade (n = 18)

**Figure 8. 2015 Logramos Mathematics Performance, 2011–2012 HISD HIPPY Cohort vs. HISD Students<sup>3</sup> at Comparable Grade Levels**



Note: First grade (n = 29); third grade (n = 32); fourth grade (n = 18)

- Logramos reading and mathematics performance for the 2011–2012 HISD HIPPY student cohort can be found in **Figures 7** and **8**, respectively. Results for 29 first-grade, 32 second-grade, and 18 third-grade students are shown. Additional data on the cohort are included in **Appendix E**, p. 24.

<sup>3</sup> HISD results were obtained from the Logramos<sup>®</sup> District Performance Profile, 2015.



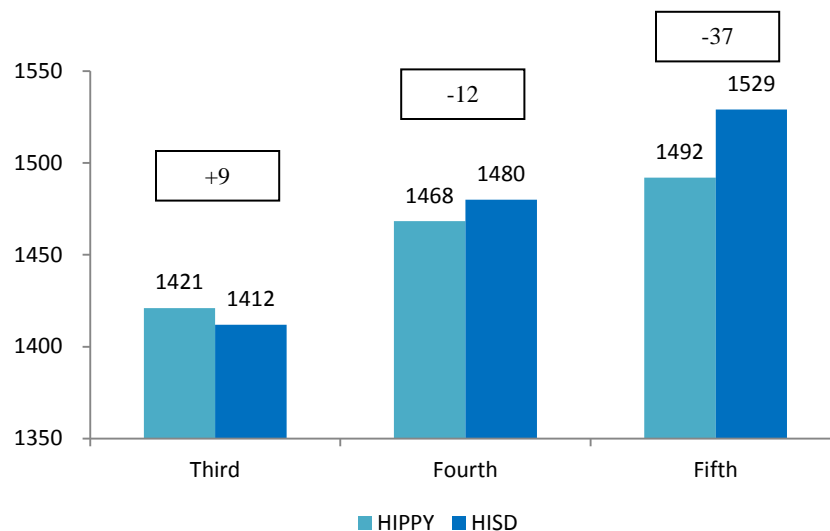
- Students at each grade level attained higher mean standard scores than the district in ELA and mathematics.
- First- and second-grade HISD HIPPY students' performance exceeded the district by 5.6 and 5.1 points in ELA and 7.0 and 8.1 points in math at the respective grade levels. While third-grade ELA and mathematics performance was higher for HISD HIPPY students than the district, the difference was between 1.6 points in mathematics and 1.9 points in ELA.

**How did the 2009–2010 HISD HIPPY cohort perform on the 2015 English and Spanish STAAR reading and mathematics tests compared to HISD students at comparable grade levels?**

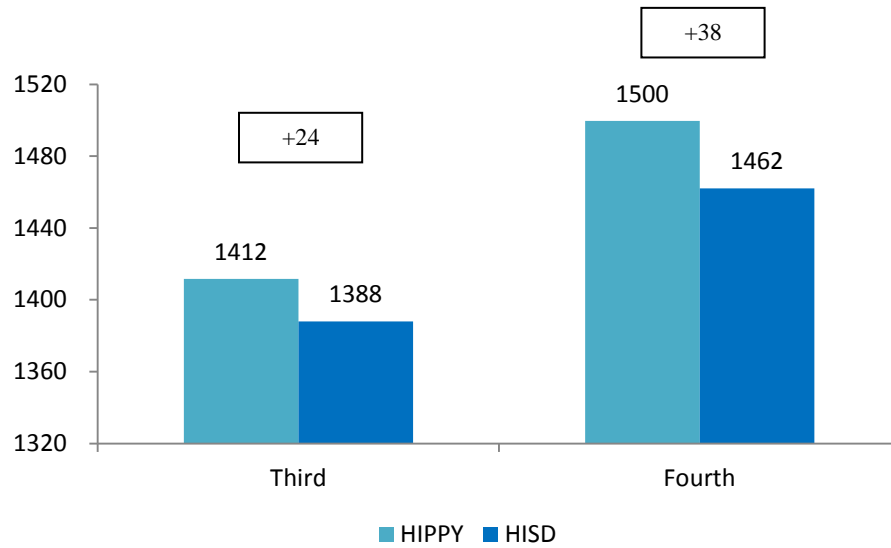
STAAR results for the 2009–2010 HISD cohort were used to show the effect of HIPPY overtime since these students participated in the program at least during the cohort year. The demographic characteristics of the cohort can be found in **Appendix F** (p. 25). **Figures 9 and 10** depict the average scale scores of the 2009–2010 HISD HIPPY student cohort compared to students districtwide at comparable grade levels on the 2015 STAAR English and Spanish reading subtests, respectively. Test results of 21 HISD HIPPY third-grade students in English reading and 29 students in Spanish reading are presented in Figures 9 and 10. In addition, the test results of 55 HISD HIPPY fourth-grade students in English reading and 16 students in Spanish reading are depicted in Figures 9 and 10. Additional data on the cohort are included in **Appendix G**, p. 26.

- Figure 9 reveals that the mean scale score on the English STAAR reading test was higher for the HISD HIPPY cohort than the district by 9 points at third grade. However, the district average scale score was higher than the HIPPY cohort by 12 points at fourth grade and 37 scale-score points at fifth grade (Figure 9).
- On the Spanish STAAR reading test, the mean scale scores of the HISD HIPPY cohort exceeded district averages at third and fourth grades by 24 and 38 points, respectively (Figure 10).

**Figure 9. 2015 English STAAR Reading Performance, 2009–2010 HISD HIPPY Cohort vs. HISD Students at Comparable Grade Levels**

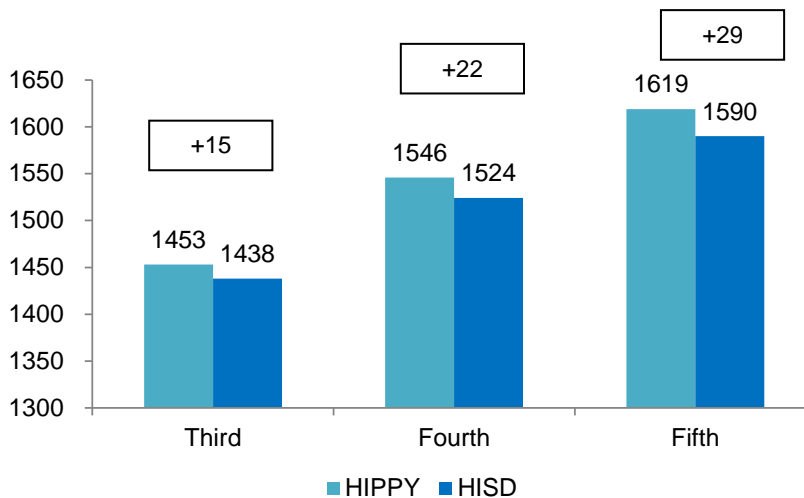


**Figure 10. 2015 Spanish STAAR Reading Performance, 2009–2010 HISD HIPPY Cohort vs. HISD Students at Comparable Grade Levels**

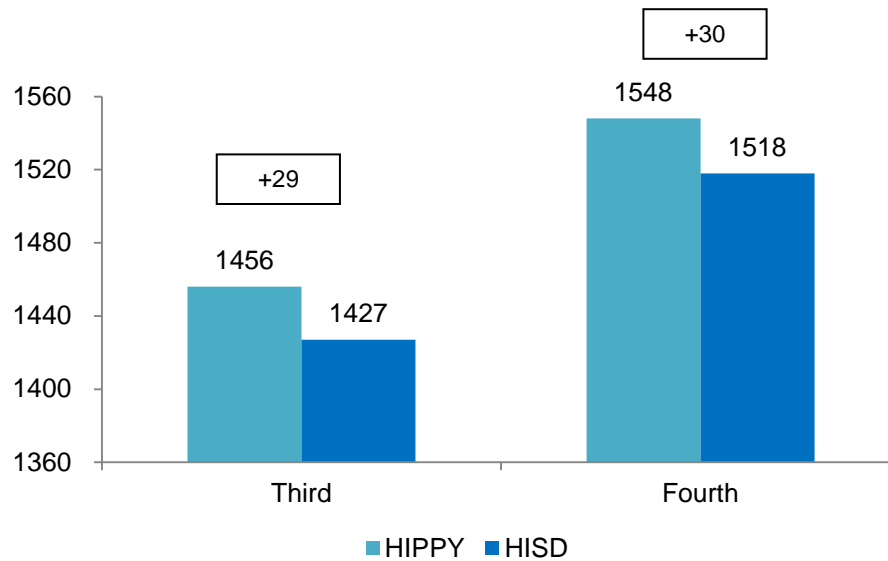


- **Figure 11** shows that mean scale scores of the 2009–2010 HISD HIPPY cohort exceeded district means on the English STAAR mathematics test at third, fourth, and fifth grades by 15, 22, and 29 scale-score points at the respective grade levels.
- Similar findings were noted on the Spanish STAAR mathematics test, with mean scale scores of the HISD HIPPY cohort higher than district means by 29 points at third grade and 30 points at fourth grade (**Figure 12**).

**Figure 11. 2015 English STAAR Mathematics Performance, 2009–2010 HISD HIPPY Cohort vs. HISD Students at Comparable Grade Levels**



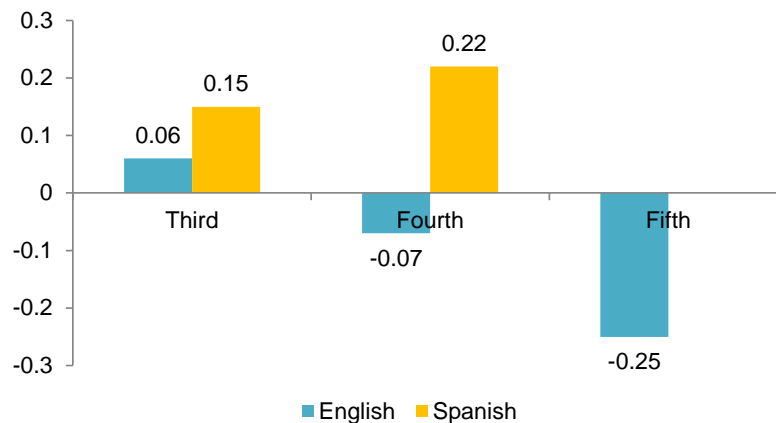
**Figure 12. 2015 Spanish STAAR Mathematics Performance, 2009–2010 HISD HIPPY Cohort vs. HISD Students at Comparable Grade Levels**



The magnitude of the HISD HIPPY program effect on English and Spanish STAAR performance for the 2009–2010 cohort are depicted in **Figures 13** and **14**. The Hedges’ g statistic was used to conduct the analysis. The non-HIPPY sample was HISD students at comparable grade levels with STAAR data whose parents did not participate in HIPPY during the cohort year.

- Figure 13 shows that the effect of the program on the STAAR Spanish reading performance of fourth grade students was small. The differences between the means of the HISD HIPPY cohort and the non-HIPPY student sample were .22 standard deviations.

**Figure 13. 2015 STAAR Reading Hedges’ g (Effect Size) Comparing 2009–2010 HISD HIPPY Cohort and Non-HIPPY HISD Students<sup>4</sup> at Comparable Grade Levels**



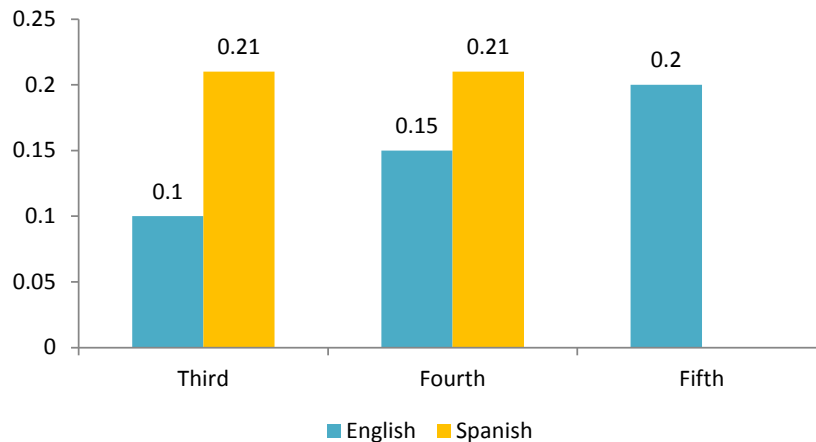
**Note: Hedges’ g: .2 = small effect; .5 = medium effect, and .8 = large effect (Cohen, 1988)**

- Figure 14 reveals, that for third and fourth-grade students, the effect of the HISD HIPPY program on STAAR mathematics performance was small. The differences between the means

<sup>4</sup> Non-HIPPY HISD students were students whose parents did not participate in HIPPY during the 2009–2010 cohort year.

of the HISD HIPPY cohort and the non-HIPPY student sample at the third and fourth grades were .21 standard deviations at both grade levels.

**Figure 14. 2015 STAAR Math Hedges' g (Effect Size) Comparing 2009–2010 HISD HIPPY Cohort and Non-HIPPY HISD Students<sup>5</sup> at Comparable Grade Levels**



Note: Hedges' g: .2 = small effect; .5 = medium effect, and .8 = large effect (Cohen, 1988)

## Discussion

HIPPY was designed to assist parents from disadvantaged backgrounds with educational opportunities to prepare their child for school. HIPPY operated in 40 HISD elementary schools during the 2014–2015 academic year, spanning across seven Board of Trustee districts. The current year reflected an increase in exposure of the program to students from the previous year, which included 34 elementary schools in six Board districts. An additional \$10,143 of funding during the 2014–2015 academic year was used to support the expansion of HISD HIPPY. The vast majority of students served in the program were Hispanic, with moderate proportions of African American and low proportions of Asian students participating in the program over the past six years.

Academic performance of HISD HIPPY students was assessed using the 2015 Logramos reading (ELA) and mathematics assessments and the English and Spanish STAAR reading and mathematics tests. This method posed a limitation to the study in that the cohort samples selected for Logramos and STAAR performance analyses were only those with sufficient numbers of HISD HIPPY elementary school students to compare with students in the district. Overall, the 2009–2010 through 2011–2012 cohorts outperformed students districtwide on the reading (ELA Total) and mathematics (Math Total) Logramos assessments. This trend was noted at third and fourth grades for the 2009–2010 cohort; second, third, and fourth grades for the 2010–2011 cohort; as well as first, second, and third grades for the 2011–2012 cohort.

STAAR performance analyses were conducted using the 2009–2010 cohort only to ensure higher numbers of students with test data. This cohort attained a higher mean scale score on the English STAAR reading test than students districtwide at third grade. However, the district average scale score was higher than the cohort by 12 points at fourth grade, increasing to 37 points at fifth grade. Comparatively, on the Spanish STAAR reading test, the 2009–2010 cohort outperformed the district at third and fourth grades. On the English STAAR mathematics test, the mean scale scores of the cohort

<sup>5</sup> Non-HIPPY HISD students were students whose parents did not participate in HIPPY during the 2009–2010 cohort year.

exceeded the mean scale scores of students districtwide at third, fourth, and fifth grades. The HIPPY cohort also outperformed students districtwide on the Spanish STAAR mathematics test at third and fourth grades.

Independent t-tests found no statistically significant differences between the STAAR performance of the 2009–2010 HISD HIPPY cohort and a non-HISD HIPPY student sample at comparable grade levels whose parents did not participate in HIPPY during the cohort year. The magnitude of the effect of the HISD HIPPY program was also assessed using 2009–2010 cohort data. Positive effects tended to favor the cohort's performance on the Spanish STAAR. Specifically, a small effect of the program was found on the Spanish STAAR reading test performance of fourth grade students as well as on the Spanish STAAR mathematics test for third and fourth grade students. In addition, effect size analyses revealed a small effect of the program based on the cohort's English STAAR mathematics performance.

Considering the program model, the HISD HIPPY program facilitates school readiness and literacy development in preschool children. Continued longitudinal analyses of the academic performance of HISD HIPPY student cohorts may reveal additional trends in the academic performance of these students and provide information toward strategies to build on the support provided to parents.

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**Appendix A**  
**HIPPY School Sites, Current and Previous School Year**

	<b>2014–2015 (Current Year)</b>	<b>2013–2014 (Previous Year)</b>
1	Alcott ES	Alcott ES
2	Alameda ES	Bastian ES
3	Barrick ES	Burrus ES
4	Bastian ES	Codwell ES
5	Berry ES	Cook ES
6	Brookline ES	Coop ES
7	Burbank ES	De Anda ES
8	Burrus ES	De Chaumes ES
9	Cook ES	De Zavala ES
10	Coop ES	Dogan ES
11	Crespo ES	Durkee ES
12	De Anda ES	Elmore ES
13	De Zavala ECC	Farias ECC
14	Dogan ES	Foster ES
15	Elmore ES	Garcia ES
16	Farias ES	Garden Oaks ES
17	Fonwood JR ES	Harris JR ES
18	Garden Villas ES	Hartsfield ES
19	Gregory Lincoln ES	Herrera ES
20	J.R. Harris ES	Isaacs ES
21	Helms ES	Kashmere Gardens ES
22	Isaacs ES	Lantrip ES
23	Kashmere Gardens ES	Lyons ES
24	Lantrip ES	Mading ES
25	Laurenzo ECC	Marshall ES
26	Law ES	Martínez RC ES
27	Lyons ES	Mistral ECC
28	Mading ES	Mitchell ES
29	R. Martinez ES	Montgomery ES
30	Mistral ECC	Northline ES
31	Mitchell ES	Shadydale ES
32	Northline ES	TSU Charter Lab School
33	Park Place ES	Whittier ES
34	Patterson ES	Young ES
35	Port Houston ES	
36	Roosevelt ES	
37	Shadydale ES	
39	Sherman ES	
40	TSU Charter Lab School	

**Appendix B**  
**Student Demographic Characteristics of HIPYPY Students Enrolled in HISD During Cohort Year, 2009–2010 through 2014–2015**

	2009–2010		2010–2011		2011–2012		2012–2013		2013–2014		2014–2015	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>Total</b>	<b>159</b>	<b>100.0</b>	<b>159</b>	<b>100.0</b>	<b>131</b>	<b>100.0</b>	<b>136</b>	<b>100.0</b>	<b>189</b>	<b>100.0</b>	<b>198</b>	<b>100.0</b>
<b>Gender</b>												
Male	78	49.0	70	44.0	63	48.1	70	51.5	83	43.9	91	46.0
Female	81	51.0	89	56.0	68	51.9	66	48.5	106	56.1	106	54.0
<b>Ethnicity</b>												
Asian	0	-	1	0.6	2	1.5	0	-	2	1.1	4	2.0
African American	10	6.1	5	3.1	12	9.2	11	8.1	44	23.3	35	17.7
Hispanic	149	93.9	150	94.3	117	89.3	124	91.2	141	74.6	159	80.3
White	0	-	2	1.3	0	-	0	-	2	1.1	0	-
Two or More Races	-	-	1	0.6	0	-	1	0.7	0	-	0	-
<b>Grade</b>												
EE	0		0	-	2	1.5	0	-	0	-	0	-
PK	65	40.8	134	84.3	90	68.7	82	63.2	165	87.3	176	88.9
K	72	44.9	25	15.7	39	29.8	49	36.0	18	9.5	15	7.6
First	22	14.3	0	-	0	-	1	0.7	1	.5	6	3.0
Second	0	-	0	-	0	-	0	-	1	.5	0	-
Third	0	-	0	-	0	-	0	-	1	.5	1	.5
Fourth	0	-	0	-	0	-	0	-	3	1.6	0	-
<b>Limited English Prof.</b>	<b>127</b>	<b>79.6</b>	<b>126</b>	<b>79.3</b>	<b>104</b>	<b>79.4</b>	<b>107</b>	<b>78.7</b>	<b>124</b>	<b>65.6</b>	<b>142</b>	<b>71.7</b>
<b>Economically Disadv.</b>	<b>159</b>	<b>100.0</b>	<b>152</b>	<b>95.6</b>	<b>125</b>	<b>95.4</b>	<b>135</b>	<b>99.3</b>	<b>181</b>	<b>95.8</b>	<b>91</b>	<b>95.5</b>
<b>At-Risk</b>	<b>64</b>	<b>81.6</b>	<b>140</b>	<b>88.0</b>	<b>120</b>	<b>91.6</b>	<b>129</b>	<b>94.9</b>	<b>185</b>	<b>97.9</b>	<b>194</b>	<b>98.0</b>



Appendix C  
 HISD HIPPY 2009–2010 Cohort  
 Logramos ELA Total and Math Total

2015 Logramos ELA and Math Standard Scores and NCEs							
Grade	Measure	Subtest	N	Minimum	Maximum	Mean	Std. Deviation
Third	Standard Score	ELA Total	30	180	245	208.40	17.166
		Math Total	28	186	243	209.64	14.975
	NCE	ELA Total	30	36	99	71.86	18.360
		Math Total	28	32	99	66.90	18.858
Fourth	Standard Score	ELA Total	16	201	245	221.31	13.549
		Math Total	16	204	242	222.38	12.743
	NCE	ELA Total	16	51	99	72.50	14.701
		Math Total	16	51	99	76.19	17.058

Appendix D  
 2010–2011 HISD HIPPY Cohort  
 Logramos ELA Total and Math Total

2015 Logramos ELA Total and Math Total Standard Scores and NCEs							
Grade	Measure	Subtest	N	Minimum	Maximum	Mean	Std. Deviation
<b>Second</b>	Standard Score	ELA Total	27	169	229	204.74	15.573
		Math Total	27	161	227	204.30	16.033
	NCE	ELA Total	27	25	99	73.59	19.425
		Math Total	27	17	99	79.93	20.716
<b>Third</b>	Standard Score	ELA Total	43	184	234	211.14	13.553
		Math Total	42	188	240	212.00	12.465
	NCE	ELA Total	43	39	96	70.77	15.142
		Math Total	42	40	99	75.95	15.997
<b>Fourth</b>	Standard Score	ELA Total	6	201	245	227.67	15.306
		Math Total	6	212	237	226.33	10.013
	NCE	ELA Total	6	51	99	79.50	16.562
		Math Total	6	63	98	82.17	13.761

Appendix E  
 2011–2012 HISD HIPPY Cohort  
 Logramos ELA Total and Math Total

2015 Logramos ELA Total and Math Total Standard Scores and NCEs							
Grade	Measure	Subtest	N	Minimum	Maximum	Mean	Std. Deviation
First	Standard Score	ELA Total	29	166	226	201.41	15.562
		Math Total	29	162	216	191.83	14.945
	NCE	ELA Total	29	34	99	79.41	17.955
		Math Total	29	38	99	80.24	18.552
Second	Standard Score	ELA Total	32	177	244	206.84	17.124
		Math Total	32	168	244	206.59	18.898
	NCE	ELA Total	32	39	99	75.09	18.480
		Math Total	32	27	99	80.41	20.369
Third	Standard Score	ELA Total	18	190	230	208.22	12.624
		Math Total	18	190	227	212.22	10.167
	NCE	ELA Total	18	47	91	67.67	14.088
		Math Total	18	45	99	77.17	14.176

Appendix F  
Demographic Characteristics of 2009–2010 HISD HIPPY Cohort  
used in  
2015 STAAR Reading and Mathematics Scale Score and Effect Size Analyses

	2009–2010 (N = 206)	
	n	%
<b>Total</b>	<b>144</b>	<b>100.0</b>
<b>Gender</b>		
Male	82	56.9
Female	62	43.1
<b>Ethnicity</b>		
Asian	-	-
African American	-	-
Hispanic	143	99.3
White		.7
Two or More Races	1	
<b>Grade</b>		
EE	-	-
PK	-	-
K	-	-
First	-	-
Second	1	.7
Third	53	36.8
Fourth	74	51.4
Five	13	9.0
Higher than Grade Five	3	2.1
<b>Limited English Proficient</b>	112	77.8
<b>Economically Disadvantaged</b>	134	93.1
<b>At-Risk</b>	125	86.8

**Appendix G**  
**2009–2010 HISD HIPPY Cohort and**  
**Non-HISD HIPPY Third, Fourth, and Fifth Grade Students’**  
**Data Used for Effect Size Analyses**

STAAR Reading								
Grade	Language	Group	N	Mean Scale Score	Std. Deviation	Mean Difference	t	p
Third	English	HISD HIPPY	21	1421.05	156.784	9.180	.286	.775
		Non-HIPPY	12715	1411.87	147.134			
	Spanish	HISD HIPPY	29	1411.59	157.313	23.421	.832	.405
		Non-HIPPY	4273	1388.16	150.991			
Fourth	English	HISD HIPPY	55	1468.35	158.787	-11.270	-.557	.577
		Non-HIPPY	14814	1479.62	149.694			
	Spanish	HISD HIPPY	16	1499.56	189.710	37.589	1.012	.312
		Non-HIPPY	1629	1461.97	147.453			
Fifth	English	HISD HIPPY	13	1491.54	124.532	-36.98	-.893	
		Non-HIPPY	15248	1528.52	149.186			

Note: The Non-HIPPY sample was HISD students at comparable grade levels with STAAR data whose parents did not participate in HIPPY during the cohort year.

STAAR Math								
Grade	Language	Group	N	Mean Scale Score	Std. Deviation	Mean Difference	t	p
Third	English	HISD HIPPY	25	1453.16	156.573	15.151	.498	.618
		Non-HIPPY	12632	1438.01	151.924			
	Spanish	HISD HIPPY	27	1456.00	142.171	29.136	1.161	.246
		Non-HIPPY	4055	1426.86	129.942			
Fourth	English	HISD HIPPY	56	1545.80	151.334	21.711	1.107	.268
		Non-HIPPY	14616	1524.09	146.410			
	Spanish	HISD HIPPY	15	1548.07	153.630	30.346	.849	.396
		Non-HIPPY	1560	1517.72	137.595			
Fifth	English	HISD HIPPY	13	1619.23	147.759	29.472	.706	.480
		Non-HIPPY	14991	1589.76	150.466			

Note: Non-HIPPY sample was HISD students at comparable grade levels with STAAR data whose parents did not participate in HIPPY during the cohort year.