

MEMORANDUM

September 30, 2021

TO: Margarita Gardea
Officer, Elementary Curriculum and Development

FROM: Allison Matney, Ed.D.
Executive Officer, Research & Accountability

SUBJECT: **Investigating Current Performance Trends and Academic Persistence from Prekindergarten to First Grade of HISD HIPPY Students, 2020–2021**

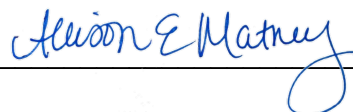
CONTACT: Allison Matney, 713-556-6700

Attached is a copy of the HIPPY program evaluation for the 2020–2021 academic year. The evaluation measured the academic performance of HISD students whose parents participated in HIPPY using the kindergarten Logramos and Iowa assessments, the prekindergarten CIRCLE assessments, and the Bracken assessment. Parents' perceptions of their child's developmental progress were also measured using the PICCOLO and ASQ.

Key findings include:

- HIPPY kindergarten students attained higher mean normal curve equivalent (NCE) scores on the winter 2020 administration of the English language Iowa reading and mathematics subtests compared to the district, attained comparable Spanish language arts, and higher Spanish language mathematics scores than the district.
- Substantial increases were observed relative to the percentage of HIPPY prekindergarten students who met benchmarks from beginning-of-year (baseline) to end-of-year on all CIRCLE Spanish literacy and mathematics assessments, and English mathematics assessments. Results demonstrated an increase in students' ability to identify letters in the alphabet, expressive vocabulary skills, understanding sounds, and early mathematical skills.
- The long-term effect of the program was demonstrated through survival analyses, estimating that HIPPY students successively persisted from prekindergarten to first grade at a higher rate compared to Non-HIPPY students.
- Effect size analyses based on Bracken assessment results estimated a large impact of HIPPY on school readiness.
- Paired t-test analyses using PICCOLO revealed statistically significant increases in parents' perceptions of their parenting skills in the areas of Teaching, Responsiveness, and Encouragement from pre- to post-assessments.
- The ASQ highlighted substantial decreases in the percentage of parents who were concerned about their child's developmental progress over the year.

Further distribution of this report is at your discretion. Should you have any further questions, please contact me at 713-556-6700.



AEM

Attachment

cc: Millard L. House II
Rick Cruz, Ed.D.
Marisol Castruita
Maria Gabriella Hernandez



RESEARCH

Educational Program Report

**INVESTIGATING CURRENT PERFORMANCE
TRENDS AND ACADEMIC PERSISTENCE
FROM PREKINDERGARTEN
TO FIRST GRADE OF HISD HIPPIY
STUDENTS, 2020-2021**



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EVALUATION REPORT

BUREAU OF PROGRAM EVALUATION

Investigating Current Performance Trends and Academic Persistence from Prekindergarten to First Grade of HISD HIPPY Students, 2020–2021

Prepared by Venita R. Holmes, Dr.P.H.

Abstract

Despite the coronavirus pandemic, HIPPY expanded geographically to provide services to parents of 601 children zoned to 114 elementary schools during the 2020–2021 academic year, compared to 105 schools during the previous year. Commencing in March 2020, the program was consistently delivered using a hybrid format (face-to-face and virtual), with the majority of parents completing the 30-week program in 26 weeks. The long-term effect of the program was demonstrated through survival analyses, estimating that HIPPY students successively persisted from prekindergarten to first grade at a higher rate compared to Non-HIPPY students. Other notable findings were that HIPPY kindergarten students attained higher mean normal curve equivalent (NCE) scores on the winter 2020 administration of the English language Iowa reading and mathematics subtests compared to the district, attained comparable Spanish language arts, and higher Spanish language mathematics scores than the district. Substantial increases were observed relative to the percentage of HIPPY prekindergarten students who met benchmarks from beginning-of-year (baseline) to end-of-year on all CIRCLE Spanish literacy and mathematics assessments, and English mathematics assessments; demonstrating students' greater ability to identify letters in the alphabet, expressive vocabulary skills, understanding sounds, and early mathematical skills. Effect size analyses based on Bracken assessment results estimated a large impact of HIPPY on school readiness. Paired t-test analyses using PICCOLO revealed statistically significant increases in parents' perceptions of their parenting skills in the areas of Teaching, Responsiveness, and Encouragement from pre- to post-assessments. The ASQ highlighted substantial decreases in the percentage of parents who were concerned about their child's developmental progress over the year. With strong academic, social-emotional, and family support during preschool years, academic benefits for HIPPY children was evident during their primary years of schooling.

Introduction

Increasing demands to improve the academic achievement of school-aged children has extended the educational system beyond schools into the homes of families throughout the United States (Durisic & Bunijevac, 2017; Hilado, Kallemeyn, & Phillips, 2013). Numerous research studies have shown that parental involvement has a positive impact on the child's learning (Cotton & Wiklund, 1989; Goodson & Hess, 1975; Henderson, 1987), and that academically-prepared pre-school children were strongly influenced by learning opportunities at home (Barnett, Roost, & McEachran, 2012; Barton, 2016; Kagitcibasi, Sunar, & Bekman, 2001).

The Houston Independent School District (HISD) has made a long-term investment in quality learning experiences for children through the Home Instruction for Parents of Preschool Youngsters (HIPPY) (Figure 1). HIPPY reinforces a model of shared learning through

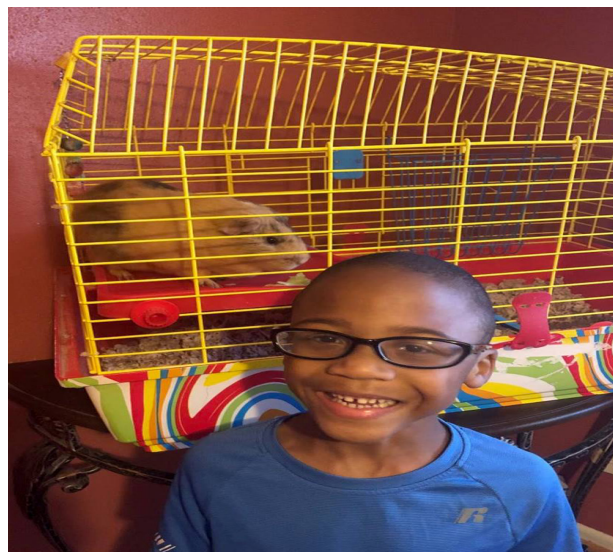


Figure 1: HIPPY child learning about animals at home



Figure 2: HIPPY child learning completing literacy activity

child-centered and family engagement activities to ensure that children successfully transition from the home environment to their primary years of school and beyond (Foster et al., 2005; Tudge et al., 2003). Moreover, HIPPY strives to reduce the learning gaps among economically-disadvantaged children and their more affluent peers by providing evidence-based resources (**Figure 2**). Efforts are made to increase parent's self-efficacy, enhance their parenting style, the learning environment at home, networking skills, and social connectedness to boost their children's interest in learning, cognitive ability, and social-emotional adjustment to school (Barnett, Roost, & McEachran, 2012). HIPPY strategies are consistent with Texas' priority for developing a better education system for all children (The State of Texas, 2015).

Background

HISD launched HIPPY during the 1993–1994 school year. The number of targeted schools and the communities that HIPPY serves has steadily increased over the years (**Figure 3**). **Appendix A** (p. 15) lists the 114 schools where HIPPY programs were implemented during the 2020–2021 academic year. The lists are presented by primary funding source, i.e., Title I or the Texas Home Visiting Grant. A geographical depiction of school locations is shown in **Appendix B** (p. 16).

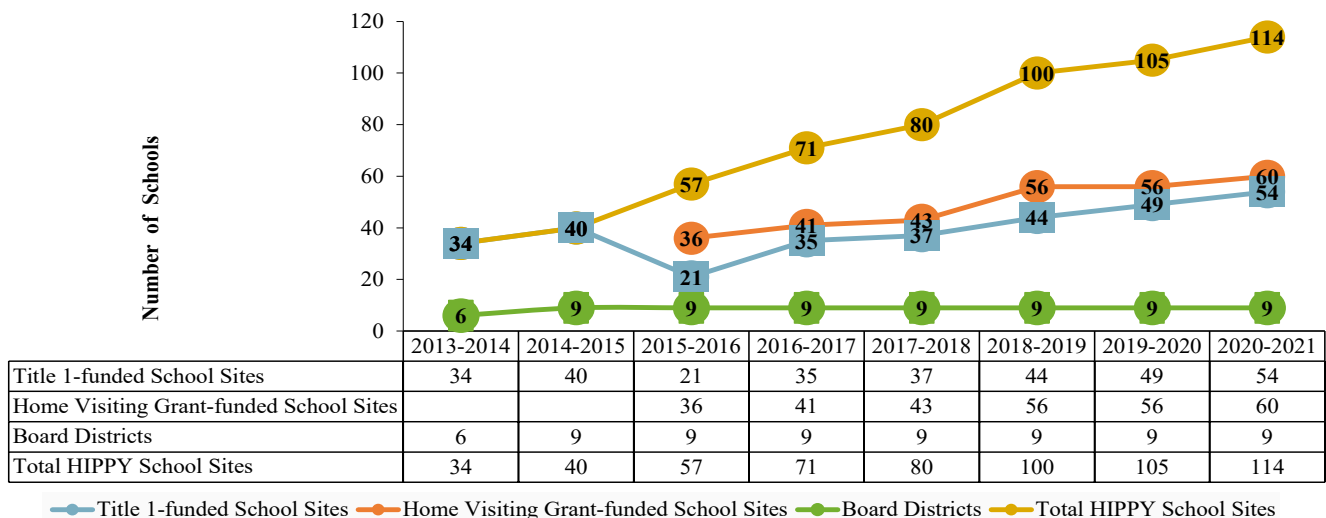


Figure 3: HISD Title I and Home Visting Grant HIPPY School Sites, Past Eight Years (Note: The 2019–2020 data reflects duplicate results; two schools were served by both Title I and Home Visting Grant staff.)

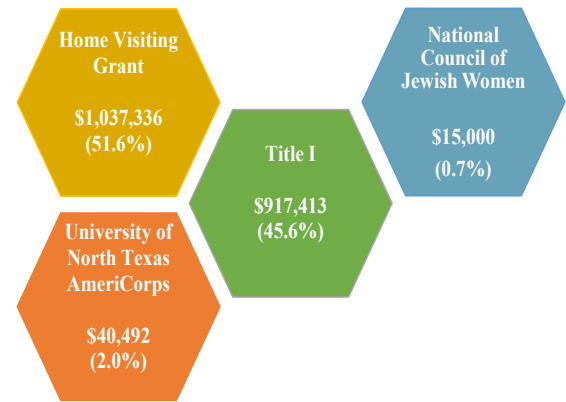


Figure 4: HIPPY funding sources, 2020–2021

Funding Sources

Funding for HIPPY has consistently been provided through multiple sources, including federal Title I grants, the University of Texas AmeriCorps, the National Council of Jewish Women, and the Texas Home Visiting grant (**Figure 4**). During the 2019–2020 academic year, 53% of the funding was provided by the Texas Home Visiting Grant, 44% by Title I, 2% by the University of North Texas (UNT) AmeriCorps, and 1% by the National Council of Jewish Women. Comparatively, in 2020–2021, approximately 51% of funding was provided by the Texas Home Visiting Grant, 46% by Title I, 2% by UNT AmeriCorps, and nearly 1% by the National Council of Jewish Women. At the state level, the Home Visiting Grant is funded by the Texas Health and Human Services Commission.

The HIPPY Theoretical Model

Over the years, targeted HISD HIPPY parents had preschool children ages three to five years old, with focused recruitment on parents with three-year-old children. Beginning in the 2019–2020 school year, the program recruited two-year old children and their parents. The U.S. Department of Health and Human Services (2017) identified five central components of HIPPY, including (1) developmentally-appropriate curriculum, (2) weekly home visits



Figure 5: HIPPY child engaged in virtual counting activity

and regular group meetings, (3) professional coordinators with sensitivity to needs of vulnerable families, (4) role play as the method of instruction, and (5) staff structure with peer home visitors from the community. These components support the development of basic academic readiness concepts and skills, including 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). A description of key HISD HIPPY program components are presented below to demonstrate their alignment with state and federal expectations for preschool programs.

The HIPPY Curriculum

In spite of the pandemic, the HIPPY curriculum was delivered in HISD as designed by HIPPY USA. Specifically, staff used standardized instructional materials, including story books, weekly activity packets, and manipulatives. The curriculum was, traditionally, implemented using a 30-week activity packet with approximately 10 activities for parents and children. However, the program was completed in 26 weeks for some families, while other families completed the program in 30 weeks during the past two years. These activity packets build children's skills in the five HIPPY domains (literacy, math, motor, language, and science), while reinforcing the development of oral language, sensory skills, perceptual discrimination, and problem solving skills. The materials allowed parents with little or no formal schooling to systematically teach their children. Parents were encouraged to help their children recognize shapes and colors, tell stories, follow directions, and solve logical problems to support school readiness (Figures 5).

Beginning in the 2019–2020 academic year, the coronavirus pandemic changed how HIPPY was delivered to families. In 2019–2020 and 2020–2021, the curriculum was delivered in person, and the instructional component was delivered virtually (hybrid format).

Home Instructors and Program Coordinator

A typical home instructor provided services for up to 18 parents. The home instructor's main responsibility was to deliver the curriculum to his/her assigned parents. Home instructors scheduled their own appointments and met with their assigned

parents at the parent's home once a week or virtually. Parents were provided packets containing the week's activities. The home instructors engaged in role-play with the parents, often using his or her own child. Home instructors did not work directly with the child.

Home instructors were part-time employees of HISD, and worked approximately 30 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 General Education Development (GED) high-school equivalent certificate, (3) a valid Texas Driver's License, (4) transportation, and (5) a valid permit to work in the United States. The home instructors received weekly HIPPY training conducted by a full-time HIPPY coordinator. The program coordinator recruited and trained home instructors, organized group meetings, developed enrichment activities, and helped to recruit parents into the program. Most home instructors were parents who had young children attending the school to which they were assigned. There were two HIPPY program managers, one funded by Title I and one funded by the Home Visiting Grant program. These managers jointly supported the team by conducting home observations and telephone surveys to determine whether the program was meeting families' needs. HIPPY managers also provided professional development to the home instructors to improve program implementation. Topics included resume writing, dress for success, and path to college.

Staff and Group Meetings

Home instructors practiced the week's role-playing lessons and activities during staff meetings. Information was shared about challenges that may arise during home visits. Group meetings provided additional networking opportunities for parents to discuss concerns and ask questions. Beneficial community resources were shared among families. HIPPY held mandatory annual conferences and retreats during the 2020–2021 academic year, including the

- Annual Kickoff Agenda for all Texas HIPPY personnel, November 2020;
- Virtual Coordinators' Retreat, August 10–14, 2020; and the
- Virtual HIPPY National Conference, HIPPY USA May 5–7, 2021 (mandatory for administrators and coordinators at the national level).

HIPPY Advisory Board

During the 2020–2021 academic year, HISD HIPPY had a 15-member Advisory Board consisting of community partners from the City of Houston, National Council of Jewish Women, Houston Community College, HISD Strategic Partnerships, along with an HISD principal and parent. The Advisory Board helped parents support their children by promoting HIPPY in the community; assisting in the procurement of funds; providing advice regarding planning, implementation, and problem solving; assisting with program special events, guest speakers, and special needs; and fostering cooperative working relationships with resource agencies, community and volunteer groups, and other early childhood/family support programs. HIPPY workers accessed resources on housing, domestic violence, mental health, for example, and shared these resources with families.

Little Learners 2 (LL2)

LL2 was initiated during the 2018–2019 school year. It

operates at Title-I school sites only. The program was designed for parents of two-year old children. HIPPY USA provided a special curriculum for two-year old children. These children completed 22 lessons using the same role-play, home-based techniques, and academic focus areas as older HIPPY children. The Title I Manager assisted with the revision of the Spanish curriculum. The 2020–2021 academic year was the fourth year of LL2 implementation.

HIPPY Summer Program

During the 2020–2021 academic year, an extension of the program was implemented in summer 2021 using Title I funds. A total of 200 families, which included 244 children, participated in the HIPPY Summer Program. The five-week program was successfully completed by 186 families. The curriculum was created by the Children’s Learning Institute and HISD HIPPY. There were 40 lessons, 20 lessons were developed by HISD and 20 lessons were developed by the Children’s Learning Institute. The curriculum consisted of activities that were an extension of concepts covered during the school year to ensure that families were exposed to additional material (**Figure 6**). Ten home instructors delivered the lessons virtually to families; all of the curriculum was delivered at one time. Parents received educational materials and other tangible incentives for completing the program.

The HIPPY Summer Program allowed families to participate in several literacy projects. During one literacy project, parents created their own book. Other projects focused on building social-emotional, mathematics, and science skills. A survey was conducted to gather feedback from parents who participated in the program. Parents revealed that they enjoyed the program a lot and showed interest in participating in the program next summer. Parents noted that skills acquired during the summer will be helpful when school begins in the fall. One parent observed that the program “allowed them to continue practicing what was already learned during the school year”. Other parents noted that the summer program created a space for bonding among family members, was educational, easy to do, entertaining, and fun. Yet another parent responded that the program provided detailed and helpful materials.

Home Visiting Grant Framework

The Texas Home Visiting Grant utilized an existing local early childhood coalition, Early Matters. Early Matters merged with Good Reason Houston. The coalition’s purposes were to: (1) identify community-level needs as they relate to school readiness and to maternal/child health outcomes, (2) integrate services to create streamlined access across different business, faith-based, and government sectors throughout Harris County, (3) implement system-level strategies that address broad policy, practice, or community infrastructure issues that impact young children and families and benefit the community at-large, and (4) build relationships with key stakeholders to create a foundation for long-term sustainability.

HISD networked with different communities to identify champions that were sensitive to the goals of the program and implement activities to coordinate cross-sector services that address broader community-level issues. The coalition worked toward integrating services in ways such that young children and families had easy and coordinated access to an effective continuum of services that impacted them (e.g., home visiting, mental health, employment, education).

To improve service coordination, local coalitions developed



Figure 6: HIPPY father and son completing math activity in the HIPPY Summer Program, 2021

a coordinated referral system to ensure families could easily access services to best meet their needs, identify community-wide recruitment and retention strategies, and streamline intake processes. HISD worked to develop a user-friendly website, where all available resources on housing, domestic violence, and mental health, for example, could be stored. Home visitors shared these resources with families in their homes. (More details about the funding source can be found at Health Resources and Services Administration, n.d.)

Research Questions:

1. What were the participation trends of HISD HIPPY children over the past eight years (2012–2013 through 2020–2021)?
2. What instructional activities and resources were provided to HISD HIPPY parents using a hybrid model (face-to-face and virtual) to prepare their children for school?
3. How did HISD prekindergarten students whose parents participated in HIPPY during the 2020–2021 academic year perform on the CIRCLE assessments?
4. How did students whose parents participated in HIPPY during the 2020–2021 academic year perform on the winter 2020 administration of Logramos and Iowa assessments?
5. What was the impact of HIPPY on school readiness?
6. To what extent did HIPPY support the development of parenting skills among program participants based on the PICCOLO and the ASQ assessments?
7. What were the survival rates for the 2017–2018 cohort of HISD HIPPY and Non-HISD HIPPY prekindergarten students who successfully persisted to first grade in HISD?

Review of the Literature

Numerous research studies have explored the impact of parents’ involvement in their child’s learning and development (Goodson & Hess, 1975; Henderson, 1987; Edwards & Alldred, 2000; Henderson & Berla, 1994; Richardson, 2009; Sanders & Sheldon, 2009; Sheldon, 2009). Specifically, Goodson and Hess (1975) reviewed 29 preschool programs and found that using parents as teachers was associated with gains in children’s IQ scores, academic achievement, and improvements in parents’ teaching behaviors. Henderson (1987) reviewed 49 studies focused

on the child's learning at home, at school, and school supports, in general. The researcher observed that parent involvement had positive effects on student achievement at each level.

Studies have shown that children who were adequately prepared before preschool performed better in school (Engle et al., 2007; La Paro & Pianta, 2000). School success encompassed a vast array of behaviors and abilities, including the development of literacy and numeracy skills; the ability to follow directions, work well with other children, and focused engagement in learning (Britto, 2012; Rouse, Brooks-Gunn, & McLanahan, 2005). However, many families may be unaware of the relevancy of the child's early years toward fostering school readiness, education completion, and success later in life (Britto, 2012).

Evidence-based family coaching models, with well-trained paraprofessionals and community members have been beneficial toward developing school readiness skills in children (Kaminski et al., 2008; Shepard & Dickstein, 2009; Rotheram-Borus et al., 2018). Effective interventions have been found to use a moderate number of sessions in a limited period, and were home-based (Bakermans-Kranenburg & van IJzendoorn, 1993; Henderson & Mapp, 2002). This point is further emphasized in brain development research conducted by Hilado, Kallemeyn, and Phillips (2013), which found that the earlier in a child's educational process parent engagement begins, the more powerful the effects (Kagitcibasi, Sunar, & Bekman, 2001).

The "cost-effectiveness" of early interventions in the home has been studied to demonstrate the success of these interventions for young children. Barton (2016) documents widespread attention related to economic benefits of evidence-based home visiting programs, such as HIPPPY, and positive benefit-cost ratios due to implementation (Aos, Lieb, Mayfield, Miller, & Pennucci, 2004; Glazner, Bondy, Luckey, & Olds, 2004; Karoly et al., 2005; Olds et al., 2010). Barnett and Escobar (1987) identified a few studies with credible evidence that early intervention for economically-disadvantaged children can be a positive economic investment for communities.

Studies have explored the influence of prekindergarten on academic outcomes and closing the achievement gaps between at-risk and other children (Frede & Barnett, 2011; Haslip, 2018). Specifically, there has been evidence of sustained long-term impacts for at-risk children who attend preschool programs as they advance to prekindergarten programs (Reynolds, et al. 2010). Research conducted in a Texas HIPPPY program found significantly higher mathematics achievement for HIPPPY children compared to low-income Latino third graders who did not participate in the program (Nievar, Jacobson, Chen, Johnson, & Dier, 2011). Baker, Piotrkowski, and Brooks-Gunn (1998) followed two cohorts of HIPPPY program participants and control-group children over a two-year period, from kindergarten through first grade. In the first cohort, researchers noted that HIPPPY 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. No significant differences between HIPPPY and control-group students were observed for the second cohort, after controlling for age, gender, ethnicity, attrition, and family background.

Research that boasts the positive influence of HIPPPY relative to children whose parents did not participate in HIPPPY has been widely recognized. However, as at-risk children enter

prekindergarten, they may continue to lag behind students who are not at risk due to various factors, including developmental delays and self-regulation. To that end, the current impact of HIPPPY on student achievement was examined. Moreover, survival analysis was applied to investigate the impact of HIPPPY on children's successive persistence from prekindergarten to first grade compared to Non-HIPPPY children. The analyses controlled for children's at-risk status at prekindergarten.

Methods

Study Population

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 HIPPPY during the 2020–2021 academic year was acquired from HIPPPY administrative staff to establish which parents and children participated in the program. Simultaneously, a report was extracted from the HISD student information system (PowerSchool) to determine which students were registered by HIPPPY staff and which students were officially enrolled in an HISD school during the year. This report was acquired from the HISD Information Technology Department. Demographic characteristics of students included in the Public Education Information Management System (PEIMS) were presented in this report. Enrollment data for previous years were also based on PEIMS (Appendix C, p. 17).

Data Collection and Analyses

Academic achievement measures included the winter 2020 Logramos and Iowa assessments for kindergarten students whose parents participated in HIPPPY during the 2020–2021 academic year. The sample consisted of 51 HIPPPY students who completed the Logramos language arts assessment and 50 students who completed the Logramos mathematics assessment. Results for 21 HISD HIPPPY students on the ELA Total and 22 students on the Iowa mathematics assessments were incorporated in the analysis. Performance comparisons between the district and HIPPPY were made using mean normal curve equivalents (NCEs) scores. Riverside Publishing (1999) indicates that the NCE is a continuous measure, with a mean of 50 and a range of 1-99. Like the scale score, NCEs permits direct comparisons of different groups, and can be used to track performance over time to measure growth.

The CIRCLE English and Spanish language progress monitoring results assessed the literacy, mathematics, and school readiness skills of HIPPPY children. The assessment has demonstrated high reliability and validity in multiple research studies (Children's Learning Institute, 2016). Wave 1 (beginning-of-year, BOY) and Wave 3 (end-of-year) measured students' progress over time.

Results from the Bracken School Readiness Assessment (BSRA®) were used to determine the impact of HIPPPY toward preparing children for school. The BSRA® is an individual, standardized, cognitive test developed by Pearson Education, Inc. The assessment is designed for children in prekindergarten through second grade. The test was administered as a pretest in fall 2020 and as a posttest in spring 2021 by the University of North Texas to three-to-five year old HIPPPY children. The assessment measured six basic skills: (1) colors – identification of common colors by name; (2) letters – identification of upper-case and lower-case letters; (3) numbers/counting – identification of single and double-

digit numerals, and counting objects; (4) sizes – demonstration of knowledge of words used to depict size (e.g., tall, wide, etc.); (5) comparisons - matching or differentiation of objects based on a specific characteristic; and (6) shapes – identification of basic shapes by name (Think Tonight, 2014). Descriptive statistics were calculated. Paired t-test analysis was conducted for children with both pre- and post-assessment data. These results were used to calculate Cohen's d effect sizes. Interpretation of Cohen's d is: .2 = small effect; .5 = medium effect, and .8 = large effect (Cohen, 1988).

Survival analysis was used to estimate the percentage of HIPPY and Non-HIPPY students who successively progressed from prekindergarten to first grade. The Kaplan-Meier survival curves revealed the probability of surviving in a given length of time while considering time in intervals. The Cox proportional hazards regression model estimated the probability of prekindergarten students experiencing the event of interest at a specific time, given that the participant survived up to a specific time. A probability must lie in the range 0 to 1, with a hazard ratio less than 1, being associated with improved survival.

Research has shown that parents, regardless of socioeconomic status, location, or well-being, provide accurate information about their child's development (Rydz et al., 2005; Squires et al., 1998). Thus, the evaluation captured data from two parent assessment tools. The Parenting Interactions with Children: Checklist of Observations Linked to Outcome (PICCOLO) captured what parents were doing to support their child's development, what parents believed was important to do with their children, what parents felt comfortable doing in front of others, and what parents knew how to do with their children (Roggman et al., 2009; Roggman et al., 2013). The Ages & Stages Questionnaire (ASQ) explored the child's developmental progress based on parents' perceptions (Squires, Bricker, Twombly, Squires, & Jane, 2002). The ASQ identified parents' concerns and helped to reassure parents that their child behavior was developmentally appropriate.

Study Limitations

There were several limitations of this evaluation. Specifically, HISD HIPPY students were identified based on background information, such as their name and birth date. This information was extracted from HIPPY parent enrollment forms submitted through the University of North Texas (UNT) data system. Administrative oversight provided by UNT helped to improve the quality of the data. Background and academic performance data were only presented for students who were verified through the Public Education Information Management System (PEIMS). Collaboration with HISD HIPPY staff and HISD Instructional Technology department staff helped to verify enrollment and mitigate this limitation.

What were the participation trends of HISD HIPPY children over the past eight years (2012–2013 through 2020–2021)?

Figure 7 presents the total number of children whose parents participated in HISD HIPPY over the past eight years, including the number of children who were enrolled in HISD elementary schools. It is evident that HIPPY participation (enrolled or registered in an HISD school) increased from 518 children in 2018–2019 to 694 children in 2019–2020. There was a slight

decline in participation from 2019–2020 to 2020–2021 by 93 children, the years of the coronavirus pandemic. At the same time, the total number of children identified as enrolled in HISD schools has steadily increased from 2018–2019 to 2020–2021 (269 to 553 students). This may be, partly, due to the fact that HIPPY staff are consistently registering children in the HISD student information system.

Appendix C (p. 17) provides data to identify trends of HIPPY children who were enrolled as HISD students. The demographic characteristics of these students were found in PEIMS. It is evident that a higher percentage of males were identified as HIPPY students in 2020–2021 compared to 2019–2020 (52.0% vs. 47.0%). The percentage of White students in the program increased from .9% to 4.0%. The percentage of limited English students remained stable from the previous year to the current year (69.8% vs. 70.0%), while the percentage of economically-disadvantaged students decreased moderately (97.9% vs. 93.0%). Substantially more students were kindergartners (47.4% vs. 25.7%), and a lower proportion of students were prekindergartners (51.0% vs. 73.4%) in 2020–2021 compared to 2019–2020.

What instructional activities and resources were provided to HISD HIPPY parents using a hybrid model (face-to-face and virtual) to prepare their children for school?

HISD HIPPY home instruction lessons encompassed academic and social/emotional activities (Appendix D, p. 18). Physical activities were introduced to strengthen the children's fine and gross motor skills development. Parents modeled behaviors demonstrated by HIPPY staff that encouraged cooperative engagement with their child in developmentally-appropriate learning throughout the academic year. The HIPPY curriculum emphasized (1) phonological and phonemic awareness, (2) letter recognition, (3) book knowledge, and (4) early writing experiences. HIPPY curriculum activities were routinely reviewed and updated by HIPPY USA to ensure that the materials were relevant and reflected current research practices.

Implementation of the HISD HIPPY Summer Program was modified during the 2019–2020 and the 2020–2021 academic year to continue summer learning in spite of the coronavirus pandemic, HIPPY staff mailed packages with educational games and materials to families' home. Lakeshore Learning helped with the distribution and mail-outs of packets.

The coronavirus also impacted how HIPPY conducted the annual End-of-Year HIPPY Celebrations. This event culminates

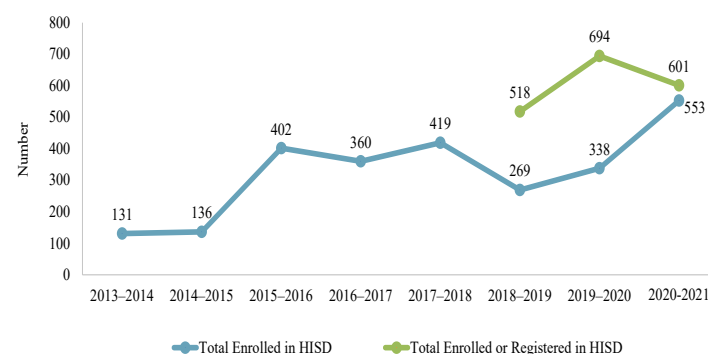
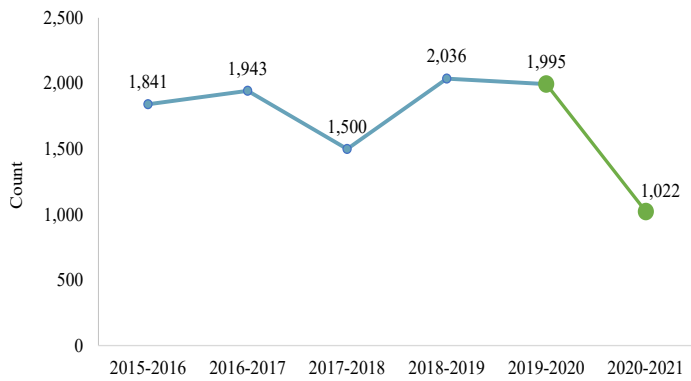


Figure 7: Number of children whose parents participated in HISD HIPPY, 2012–2013 through 2020–2021



the achievements of parents and their children for the work accomplished throughout the school year.

HISD HIPPY hosted 11 drive-thru events during the 2020–2021 academic year. One drive-thru event was a *Back to School Store* sponsored by the National Council of Jewish Women (NCJW). The NCJW also provided a \$75.00 gift card from Walmart for school supplies, one certificate from Canes restaurant, an educational STEAM game, and a colorful bagel in a clear box to the 176 graduating families who completed the program.

Graphical depictions of parents' responses are shown in **Figure 9**, for parents who completed the survey in English and in **Figure 10**, for parents who completed the survey in Spanish. Common themes were that parents perceived the program as "helpful" and "convenient". Parents noted that the instructors performed an "excellent" job explaining the program, were "supportive", "provided parents with skills", and that the program "works". Parents were appreciative of the learning opportunities and materials provided to their children. In general, they were "satisfied" with the program.

CIRCLE results were used as a prekindergarten school



readiness measure for HSD students whose parents participated in HIPPY during the 2020–2021 academic year. Wave 1 of CIRCLE was the baseline or the beginning-of-year (BOY) measure, Wave 2 was the middle-of-year measure (MOY), and Wave 3 (EOY) was the end-of-year measure. The BOY and EOY results on the English and Spanish versions of the assessment can be found in **Figure 11** (literacy) (p. 8) and **Figure 12** (mathematics) (p. 8). Comparative analyses were conducted based on scores for HIPPY and Non-HIPPY students. **Appendix F** (p. 21) provides more details regarding CIRCLE, including, the number of students tested as well as their BOY and EOY performance.

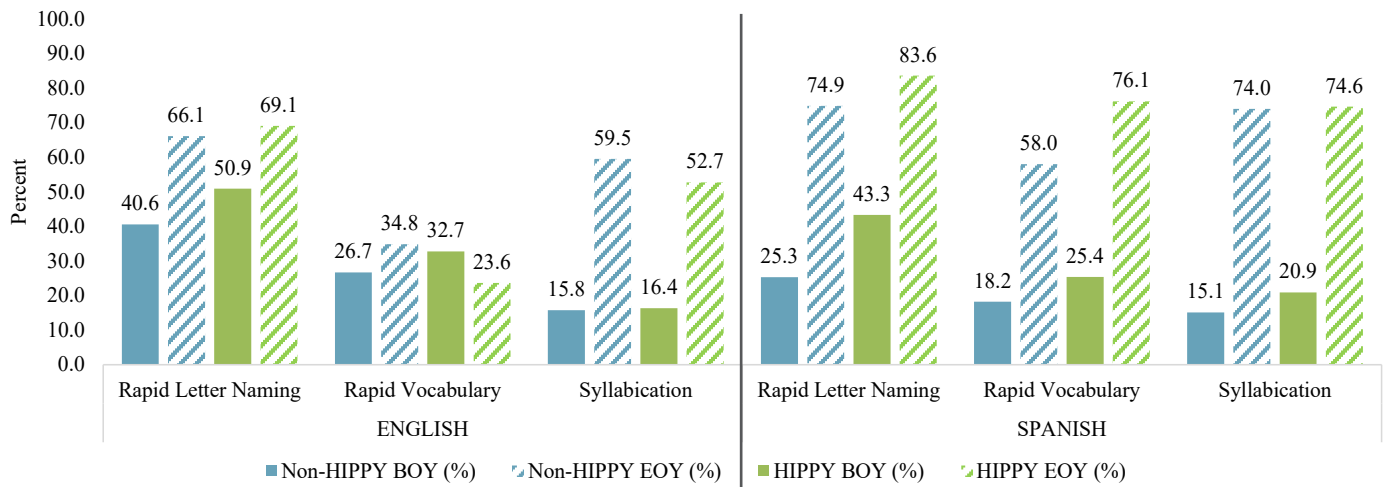


Figure 11: CIRCLE English and Spanish literacy BOY and EOY subtest results, 2020–2021

English and Spanish (66.1% and 74.9%, respectively).

Figure 12 shows the performance of HISD HIPPY students on the English and Spanish language mathematics CIRCLE assessments. At BOY, the highest percentage of HIPPY students who met benchmark was on the English and Spanish Number Naming subtests (50.0% and 40.9%; respectively). For Non-HIPPY students, the highest percentage of students who met benchmark was also on the English and Spanish Number Naming subtests (42.7% and 28.0%; respectively). By EOY, the highest percentage of HIPPY students who met benchmark continued to be on the English Number Naming subtests (81.3%), but was on the Counting Sets subtest in Spanish (90.9%). For Non-HIPPY students at EOY, the highest percentage of students who met benchmark was on the Counting Sets subtests in English and Spanish (78.5% and 81.4%, respectively).

Figure 13 (p. 9) shows the differences in the performance of HIPPY and Non-HIPPY students on the CIRCLE English and Spanish language literacy assessments, from BOY to EOY. HIPPY students made the largest gains on the English and Spanish Syllabification subtests (36.3 and 53.7 percentage points, respectively). Comparatively, Non-HIPPY students also made the largest gains on the English and Spanish Syllabification subtests (43.7 and 58.9 percentage points).

Figure 14 (p. 9) shows the differences, from BOY to EOY,

in the performance of HIPPY and Non-HIPPY students on the CIRCLE English and Spanish language mathematics assessments. HIPPY students made the largest gains in the percentage of students who met benchmark on the English and Spanish Rote Counting subtests (45.9 and 62.1 percentage points, respectively). Similar findings were observed among Non-HIPPY students, who made the largest gains on the English and Spanish Rote Counting subtests (45.6 and 58.3 percentage points, respectively).

How did students whose parents participated in HIPPY during the 2020–2021 academic year perform on the winter 2020 administration of Logramos and Iowa assessments?

Figure 15 (p. 9) presents the winter 2020 mean Normal Curve Equivalent (NCE) scores for kindergarten students whose parents participated in HISD HIPPY during the 2020–2021 academic year compared to kindergarten students districtwide on the Iowa English Language Arts (ELA Total) and mathematics assessments. The sample size was 21 HIPPY students on the ELA assessment and 22 students on the mathematics assessment. Districtwide results included 10,841 students on the ELA assessment and 11,543 students on the mathematics assessment. These results should be reviewed with caution due to the low sample sizes for HIPPY students. It is evident that students

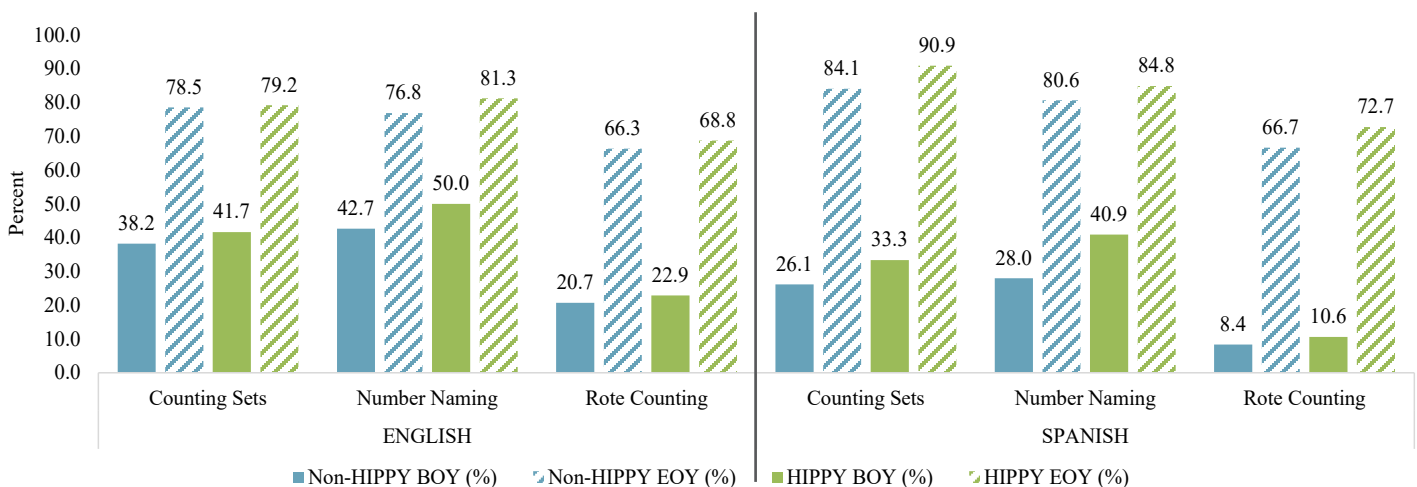


Figure 12: CIRCLE English and Spanish mathematics BOY and EOY subtest results, 2020–2021

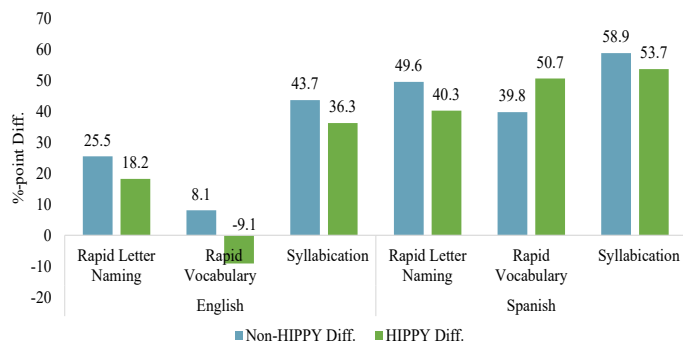


Figure 13: Paired percentage-point differences in students who met benchmark, CIRCLE literacy assessments, BOY to EOY, 2020–2021

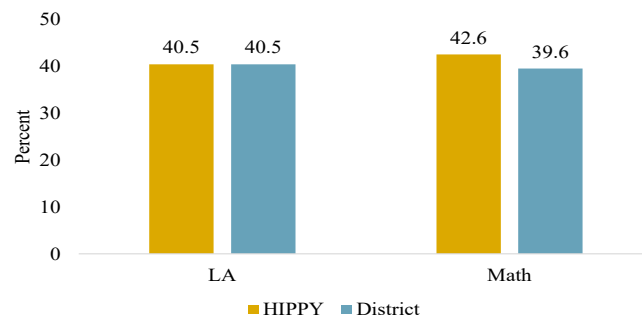


Figure 16: Logramos results for students whose parents participated in HIPPY during the 2020–2021 academic year

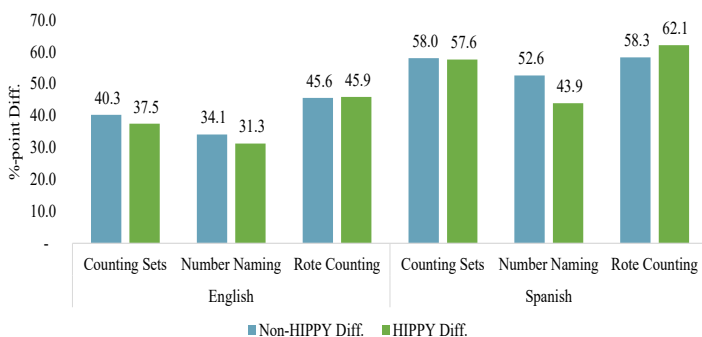


Figure 14: Paired percentage-point differences in students who met benchmark, CIRCLE literacy assessments, BOY to EOY, 2020–2021

whose parents participated in HIPPY outperformed students districtwide, as evidenced by higher mean NCEs in English language arts (47.6 NCEs vs. 40.4 NCEs) and in mathematics (44.5 NCEs vs. 37.6 NCEs).

Logramos Language Arts (LA Total) and mathematics assessment results for kindergarten students whose parents participated in HIPPY during the 2020–2021 academic year were also compared with districtwide results using winter 2020 data (**Figure 16**). The sample included 51 HISD HIPPY students on the LA assessment and 50 students on the mathematics assessment. Comparatively, districtwide results encompassed 3,544 students on the LA assessment and 3,703 students on the mathematics assessment. HISD HIPPY students attained comparable mean NCE scores relative to the district on the language arts assessment (40.5 NCEs for both groups), but a higher mean NCE on the mathematics assessment (42.6 NCEs vs. 39.6 NCEs).

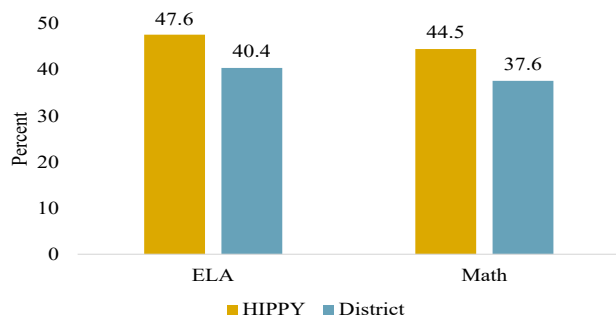


Figure 15: Iowa results for students whose parents participated in HIPPY

What was the impact of HIPPY on school readiness?

Bracken (BSRA®) results were used to assess school readiness based on children’s knowledge of concepts that parents and early childhood educators traditionally teach children to prepare them for formal education. The six basic skills measured on the Bracken are colors, letters, numbers/counting, sizes, comparisons, and shapes. The paired results for 168 children who were administered the assessment in English and 377 students who took the assessment in Spanish are presented.

Figure 17 shows an increase in the mean percentage of items correct from pre- to posttest on all English language Bracken subtests for students in the sample. The most gain was on the subtest that measured children’s identification of numbers (+20.8) and letters (+20.3). Similar findings were observed on the Spanish language Bracken, with the largest differences found on the numbers (+29.6) and letters (+27.4) subtests from pre- to posttest (**Figure 18**, p. 10).

Cohen’s d effect sizes were calculated using a within-subjects (paired samples, repeated measures) design. Interpretation of Cohen’s d is: .2 = small effect; .5 = medium effect, and .8 = large effect (Cohen, 1988). **Figure 19** (p. 10) presents finding on the English language Bracken. Effect sizes ranged from 0.387 on the colors subtest (small effect) to 0.958 on the numbers subtest (large effect). The school readiness composite score was 1.265, indicating that HIPPY had a large effect on school readiness for children tested in English.

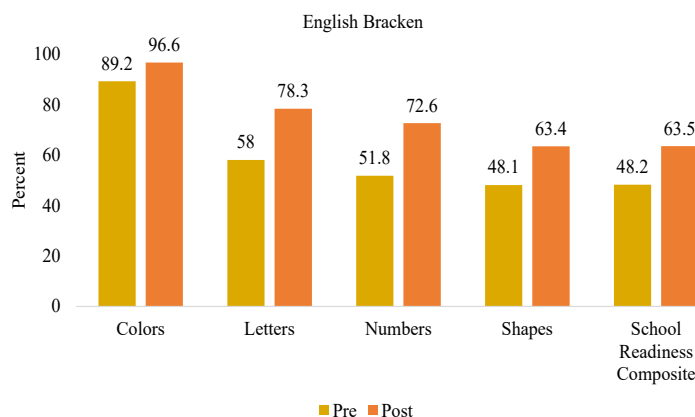


Figure 17: Bracken English language results for HIPPY students, 2020–2021 (Differences between the groups were statistical significant on all subtests at $p < .001$.)

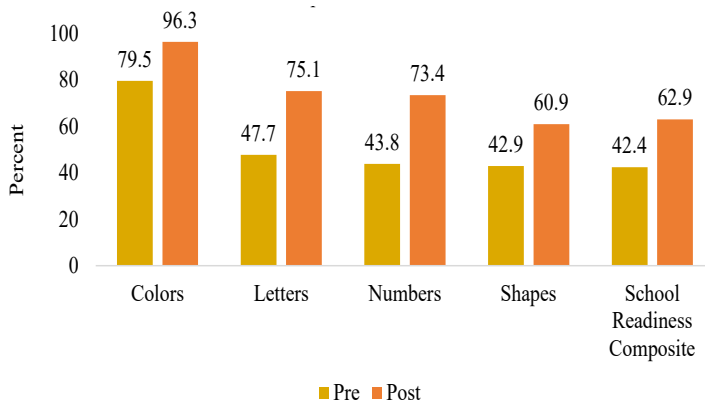


Figure 18: Bracken Spanish language results for HIPPY students, 2020–2021 (Differences between the groups were statistical significant on all subtests at $p < .001$.)

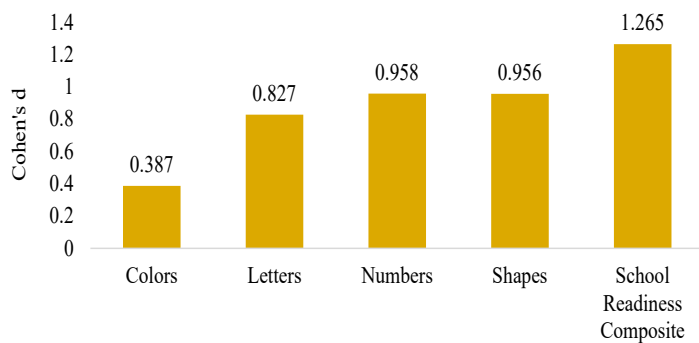


Figure 19: Bracken English language Cohen's d effect sizes, 2020–2021

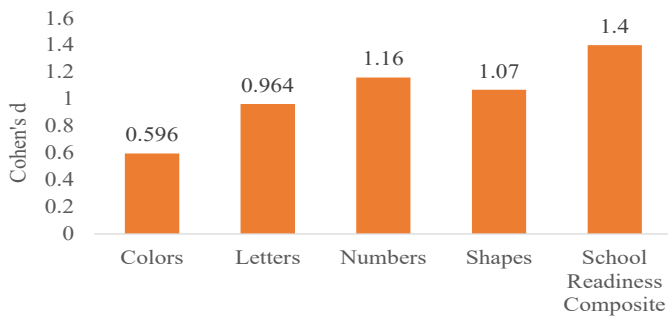


Figure 20: Bracken Spanish language Cohen's d effect sizes, 2020–2021

Figure 20 depicts the Spanish language Bracken results. The effect sizes ranged from 0.596 on the colors subtest (small effect) to 1.16 on the numbers subtest (large effect). The school readiness composite score was 1.4, indicating that the HIPPY program had a large effect on school readiness for children tested in Spanish.

To what extent did HIPPY support the development of parenting skills among program participants based on the PICCOLO and ASQ assessments?

The PICCOLO (Parenting Interactions with Children: Checklist of Observations Linked to Outcome) was designed to assess the development of parenting skills among HIPPY program participants. The PICCOLO measured what parents did to support

their child's development, what parents believed was important to do with their children, what parents felt comfortable doing in front of others, and what parents knew how to do with their children. Information on scoring can be found in **Appendix G** (p. 22).

PICCOLO results for the program consisted of unequal samples at pre- and post-assessments. Specifically, pre-assessments were completed by parents for 512 children, while post-assessments were completed by parents for 466 children. This limits the analytical procedures that can be applied to the data. Descriptive statistics were calculated to see whether there were changes in the mean scores of the groups in the PICCOLO domains. The results are shown in **Figure 21**. It is evident that parents' perceptions of their parenting skills increased from pre-assessment to post-assessment. The largest increase was on the Teaching domain by .40 percentage points.

Ages & Stages Questionnaire (ASQ)

Parents' perceptions of their child's progress in developmental areas were based on ASQ-3 communication, fine motor, gross motor, problem solving, and personal-social results. An overall rating of "pass", "advanced", or "concern" was extracted from the ASQ-3 dataset. The ASQ-3 was, primarily, administered in January and February (pretest) and in March and April (posttest). Due to the coronavirus pandemic, some parents completed the posttest in June 2021. Parents' ratings were determined by several factors, including the child's age and the developmental area measured. A total of 263 parents had both pre- and posttest ASQ-3 scores.

Figure 21 shows substantial decreases, from pretest to posttest, in the percentages of parents who indicated that they were "concerned" about their child's communication, gross motor, fine motor, problem solving, and personal-social progress. In general, there was an overall decline in the percentage of parents who were concerned about their child's development (23.2% to 14.8%).

What were the survival rates for the 2017–2018 cohort of HISS HIPPY and Non-HIPPY prekindergarten students who successively persisted to first grade in HISS?

Survival analysis was conducted using the Kaplan-Meier procedure to examine the probability that HIPPY and Non-HIPPY children who enrolled in HISS schools successively persisted (or survived) from prekindergarten to first grade in three years (the event of interest). The analyses captured median survival times

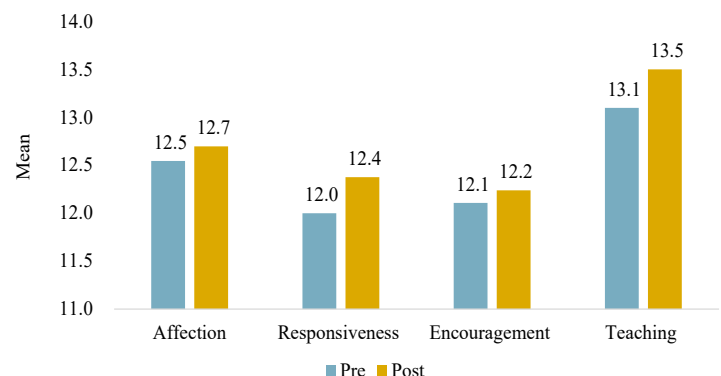


Figure 21: PICCOLO results for children whose parents participated in HIPPY, 2020–2021

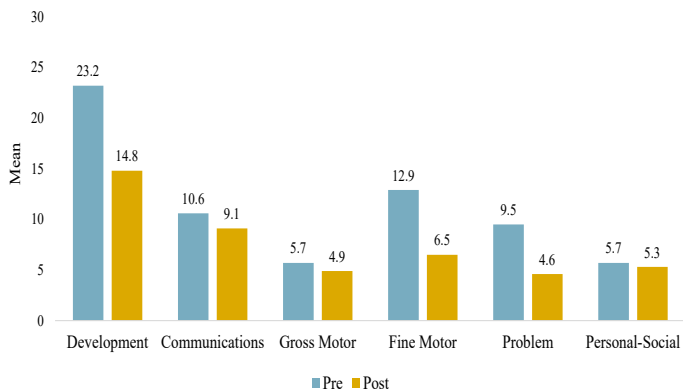


Figure 22: ASQ ratings of “concern” by parents of HIPHY children, 2020–2021

(the time at which 50% of the students reached the event of interest). The results are presented in **Appendix H** (p. 23). **Table 1** shows the number of students included in the analyses and the percentage of students in each cohort that achieved the targeted outcome. **Figure 23** highlights that 66.4% of HIPHY students persisted to the first grade in 3 years compared to 60.6% of Non-HIPHY students. The overall survival probability was higher for HIPHY students compared to Non-HIPHY students (.24 vs .17), or 24% vs. 17%, respectively (**Figure 24**). In other words, HIPHY students persisted to first grade following prekindergarten at a higher rate compared to Non-HIPHY students, in spite of their background status.

Table 1: Survival analysis, depicting number and percentage of first-time HISD prekindergarten cohort students persisting to first grade in 3 years, 2017–2018 to 2020–2021

		Survival Status		
HIPHY Status		No	Yes	Total
Non-HIPHY	n	4,905	7,552	12,457
	%	39.4%	60.6%	100.0%
HIPHY	n	112	221	333
	%	33.6%	66.4%	100.0%
Total	N	5,017	7,773	12,790
	%	39.2%	60.8%	100.0%

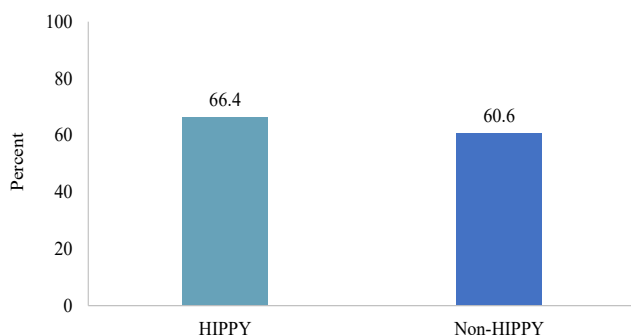


Figure 23: Survival rates, proportion of prekindergarten HIPHY and Non-HIPHY cohort students persisting to first grade in 3 years over a 4-year study period, 2017–2018 to 2020–2021

The Cox Regression test was conducted to determine the impact of HIPHY and Non-HIPHY students’ background characteristics on persisting from prekindergarten to first grade. The study explored the influence of students’ risk of dropping out of school (at-risk status), gender, and special education classification at prekindergarten. Statistical significance between HIPHY and Non-HIPHY students was only found relative to students’ at-risk status. Consequently, only these results are presented in the evaluation.

Figure 25 reveals that the survival rates for prekindergarten students who were *not* classified as at risk and persisted to first grade in three years was higher for HIPHY students compared to Non-HIPHY students (.58 vs. .32), or 58% vs. 32%. A similar trend was observed for at-risk HIPHY students compared to at-risk Non-HIPHY students (.20 vs. .16), or 20% vs. 16% (**Figure 26**). Consequently, HIPHY students who were at risk and who were not at risk persisted to first grade at higher rates than Non-HIPHY students.

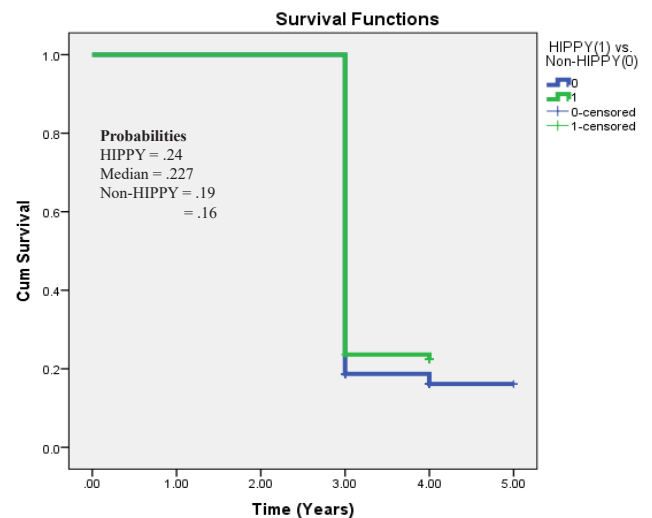


Figure 24: Survival rates of prekindergarten HIPHY and non-HIPHY cohort students persisting to first grade, 2017–2018 to 2020–2021

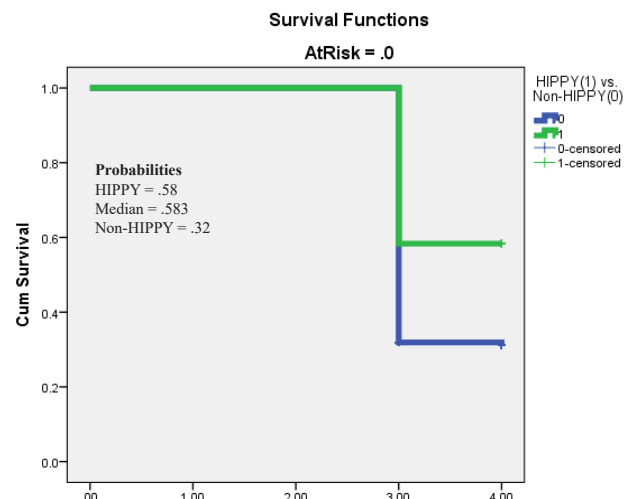


Figure 25: Survival rates of prekindergarten HIPHY and non-HIPHY cohort students not classified as “at risk” persisting to first grade, 2017–2018 to 2020–2021

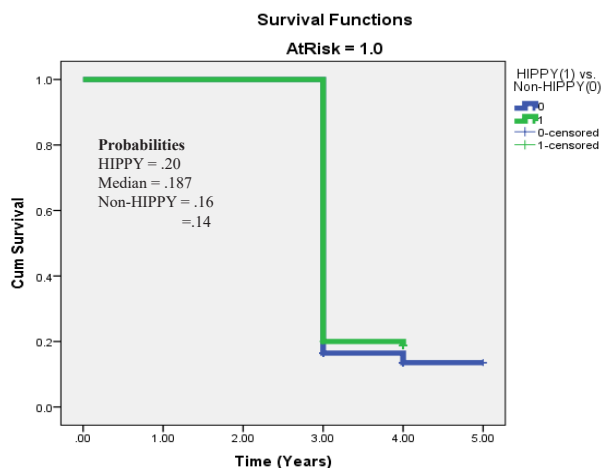


Figure 26: Survival rates of prekindergarten HIPPY and non-HIPPY cohort students classified as at risk persisting to first grade, 2017–2018 to 2020–2021

Discussion

HIPPY has been implemented in the Houston Independent School District for more than 10 years to assist economically-disadvantaged families with instructional resources and social-emotional support to prepare their preschool children for school. During the 2020–2021 academic year, HIPPY targeted over 600 parents whose children were zoned to 114 HISD elementary schools located within the 6 HISD Board district boundaries. Comparatively, 105 elementary schools were targeted during the previous school year. HIPPY was, primarily, funded by Title I and the Texas Home Visiting Grant. However, the National Council of Jewish Women and the University of North Texas has consistently contributed about 3% of the \$1.7 million budget to HISD HIPPY for the past two years and beyond.

Over the past eight years, the vast majority of students whose parents participated in HISD HIPPY was Hispanic. There was a slight increase in the proportion of African American students and limited English proficient students whose parents participated in the program during the past two years. While the number of economically-disadvantaged and at-risk students in the program increased, the increase did not boost the proportion of students in these subgroups at large from the previous year to the current year.

HIPPY program implementation was impacted by district closure, beginning in March 2020 due to the coronavirus pandemic. A hybrid model was implemented, incorporating both face-to-face and virtual learning opportunities for children and their parents. The staff modeled the curriculum on a weekly basis, with parents successfully completing the program the 30-week program at week 26. The End-of-Year Celebrations was continued by providing families with educational materials. The HIPPY Summer Program helped to prepare children, academically and socially, for the upcoming school year.

Academic performance of HISD HIPPY students was assessed using the Logramos and Iowa reading and mathematics assessments at the kindergarten level and the CIRCLE English and Spanish literacy and mathematics school readiness assessments at the prekindergarten level. Notable findings were that HIPPY kindergarten students attained higher mean normal curve equivalent (NCE) scores on the winter 2020 administration of the English language Iowa reading and mathematics subtests compared to the HISD Department of Research and Accountability

district. Moreover, HISD HIPPY students achieved comparable Spanish language arts and higher Spanish language mathematics results than the district. Substantial increases were observed relative to the percentage of HIPPY prekindergarten students who met benchmarks from BOY (baseline) to EOY on all CIRCLE Spanish literacy and mathematics assessments, and English mathematics assessments. CIRCLE outcomes demonstrated children's ability to identify letters in the alphabet; expressive vocabulary skills; understanding of sounds, and early mathematical skills. Effect size analyses revealed a large impact of HIPPY on children's Bracken school readiness skills.

The evaluation captured data from two parent assessment tools. The Parenting Interactions with Children: Checklist of Observations Linked to Outcome (PICCOLO) assessment measured what parents were doing to support their child's development, what parents believed was important to do with their children, what parents felt comfortable doing in front of others, and what parents knew how to do with their children (Roggman, et al., 2009; Roggman, et al., 2013). Paired t-test analyses of PICCOLO results yielded statistically significant increases in parents' perceptions of their parenting skills in the areas of Teaching, Responsiveness, and Encouragement. The Ages & Stages Questionnaire (ASQ) measured the child's developmental progress based on parents' perceptions (Squires, Bricker, Twombly, Squires, & Jane, 2002). Results from the ASQ revealed substantial decreases in the percentage of parents who were concerned about their child's developmental progress from pre to posttest.

Based on these findings, HIPPY program administrators should continue to target families that may have limited resources to provide a quality education for their children. There is evidence that these families benefit from having a strong support system that focuses on academic, social-emotional, and family support provided by HIPPY. Enhancing the cultural diversity of home instructors may help to attract and extend these benefits to a more diverse student population in HISD.

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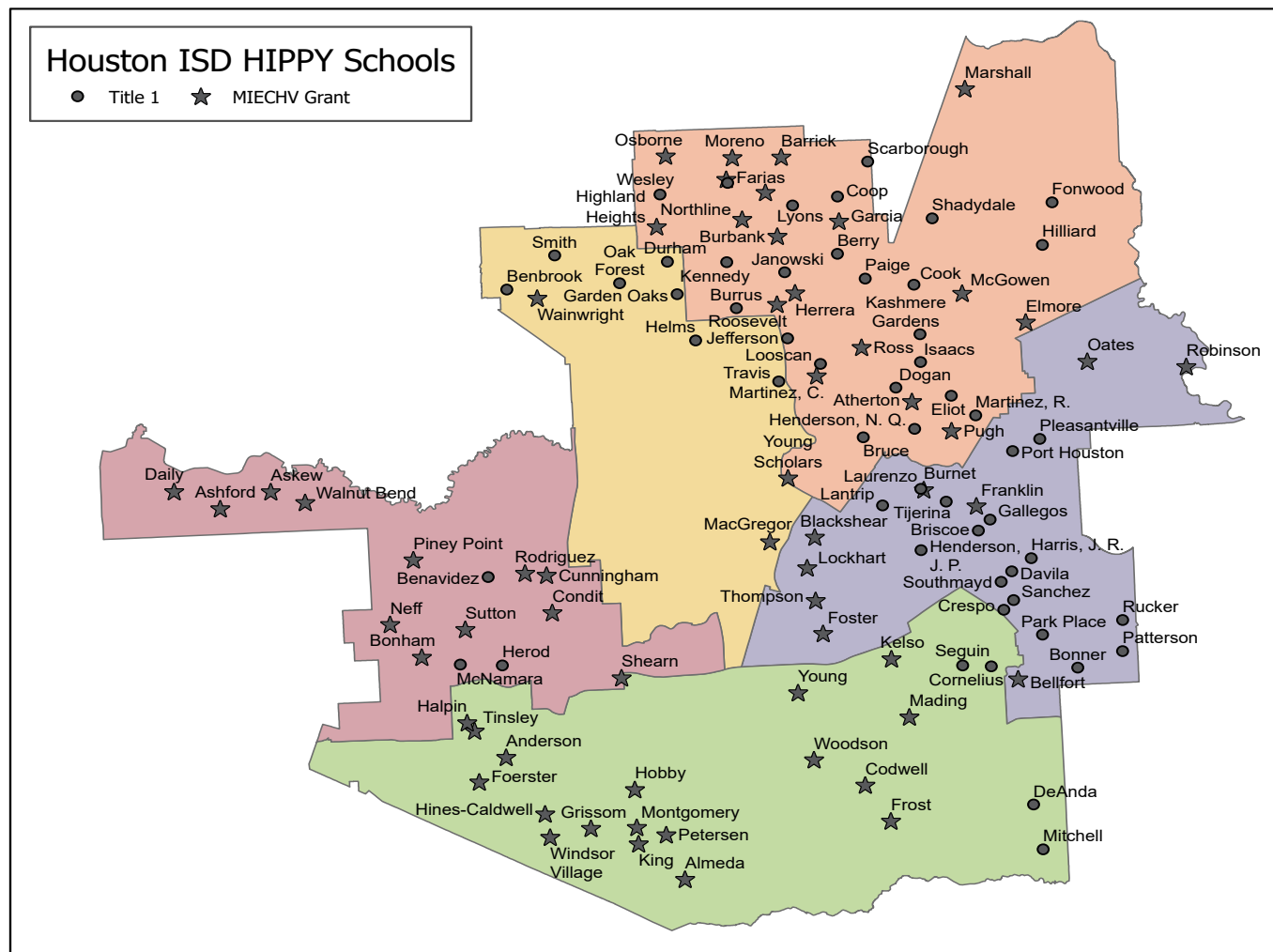
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Appendix A

2020-2021 HISD HIPPY Title I Schools (N= 54)		2020-2021 HISD HIPPY Texas Home Visiting Grant Schools (N = 60)	
Benavidez ES	Jefferson ES	Almeda ES	King, M.L. ECC
Benbrook ES	JR Harris ES	Anderson ES	Lockhart ES
Berry ES	Kashmere Gardens ES	Ashford ES	MacGregor ES
Bonner ES	Kennedy ES	Askew ES	Mading ES
Briscoe ES	Lantrip ES	Atherton ES	Marshall ES
Bruce ES	Looscan ES	Barrick ES	Martinez, C. ES
Burrus ES	Lyons ES	Bellfort EC	McGowen ES
Cook ES	Martinez, R. ES	Blackshear ES	Montgomery ES
Coop ES	McNamara ES	Bonham ES	Moreno ES
Cornelius ES	Mitchell ES	Burbank ES	Neff ES
Crespo ES	Ninfa Lorenzo ECC	Burnet ES	Northline ES
Davila ES	Oak Forest ES	Codwell ES	Oates ES
De Anda ES	Paige ES	Condit ES	Osborne ES
Dogan ES	Park Place ES	Cunningham ES	Petersen ES
Durham ES	Patterson ES	Daily ES	Piney Point ES
Eliot ES	Pleasantville ES	DeChaumes ES	Pugh ES
Farias ECC	Port Houston ES	Durkee ES	Robinson ES
Fonwood ECC	Rucker ES	Elmore ES	Rodriguez ES
Gallegos ES	Sanchez ES	Foerster ES	Roosevelt ES
Garden Oaks ES	Scarborough ES	Foster ES	Ross ES
Helms ES	Seguin ES	Franklin ES	Shearn ES
Henderson, J.P. ES	Shadydale ES	Frost ES	Sutton ES
Henderson, N.Q. ES	Smith ES	Garcia ES	Thompson ES
Herod ES	Southmayd ES	Grissom ES	Tinsley ES
Hilliard ES	Tijerina ES	Halpin ECC	Wainwright ES
Isaacs ES	Travis ES	Herrera ES	Walnut Bend ES
Janowski ES	Wesley ES	Highland Heights ES	Windsor Village ES
		Hines Caldwell ES	Woodson ES
		Hobby ES	Young ES
		Kelso ES	Young Scholars ES

Appendix B



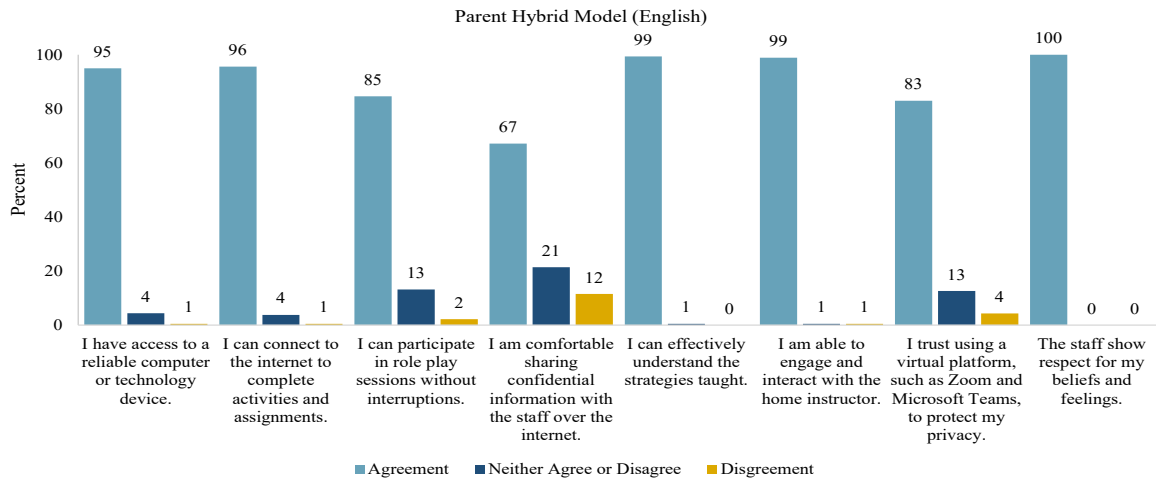
Appendix C

Demographic Characteristics of HISD Students Whose Parents Participated in HIPPY During Cohort Years, 2013-2014 through 2020-2021																
Academic Year	2013–2014		2014–2015		2015–2016		2016–2017		2017–2018		2018–2019*		2019–2020*		2020–2021*	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total Enrolled in HISD	131	100.0	136	100.0	402	100.0	360	100.0	419	100.0	269	100.0	338	100.0	481	100
Gender																
Male	63	48.1	70	51.5	196	48.8	170	47.2	210	50.1	127	47.2	159	47.0	251	52.0
Female	68	51.9	66	48.5	206	51.2	190	52.8	209	49.9	142	52.8	179	53.0	230	48.0
Ethnicity																
Asian	2	1.5	0	-	3	0.7	0	-	2	0.5	2	0.7	4	1.2	0	0.0
African Amer.	12	9.2	11	8.1	87	21.6	59	16.4	54	12.9	32	11.9	42	12.4	62	13.0
Hispanic	117	89.3	124	91.2	300	74.6	296	82.2	353	84.2	232	86.2	288	85.2	384	80.0
White	0	-	0	-	11	2.7	4	1.1	7	1.7	1	0.4	3	0.9	17	4.0
Two or More Races	0	-	1	0.7	1	0.2	0	-	3	0.7	2	0.7	1	0.3	2	0.4
Grade																
EE	2	1.5	0	-	6	1.5	7	1.9	5	1.2	5	1.9	2	0.6	10	2.0
PK	90	68.7	82	63.2	312	77.6	256	71.1	281	67.1	191	71.0	248	73.4	243	51.0
K	39	29.8	49	36.0	72	17.9	80	22.2	102	24.3	70	26.0	87	25.7	228	47.4
First	0	-	1	0.7	5	1.2	12	3.3	17	4.1	1	0.4	1	0.3	0	-
Second	0	-	0	-	4	1.0	2	.6	9	2.1	-	-	-	-	0	-
Third	0	-	0	-	1	0.2	2	.6	3	0.7	-	-	-	-	0	-
Fourth	0	-	0	-	1	0.2	1	.3	1	0.2	-	-	-	-	0	-
Limited English Proficient	104	79.4	107	78.7	255	63.4	250	69.4	277	66.1	174	64.7	236	69.8	335	70.0
Economically Disadvantaged	125	95.4	135	99.3	382	95.0	335	93.1	395	94.0	258	95.9	331	97.9	447	93.0
At-Risk	120	91.6	129	94.9	373	92.8	318	88.3	379	90.5	253	94.1	330	97.6	414	86.0
**Total Enrolled in HISD											518	100.0	694	100.0	553	100.0
<p>Note: Enrollment data based on PEIMS.</p> <p>*Academic years when HIPPY staff registered children in the HISD student information system.</p> <p>Demographic data are depicted only for HIPPY children who were captured in the Public Education Information Management System (PEIMS).</p> <p>**Total HIPPY children represent all children of parents who participated in the program. This data point was captured during the 2018-2019, 2019-2020, and the 2020-2021 academic years only when these data were documented in the HISD student information system.</p>																

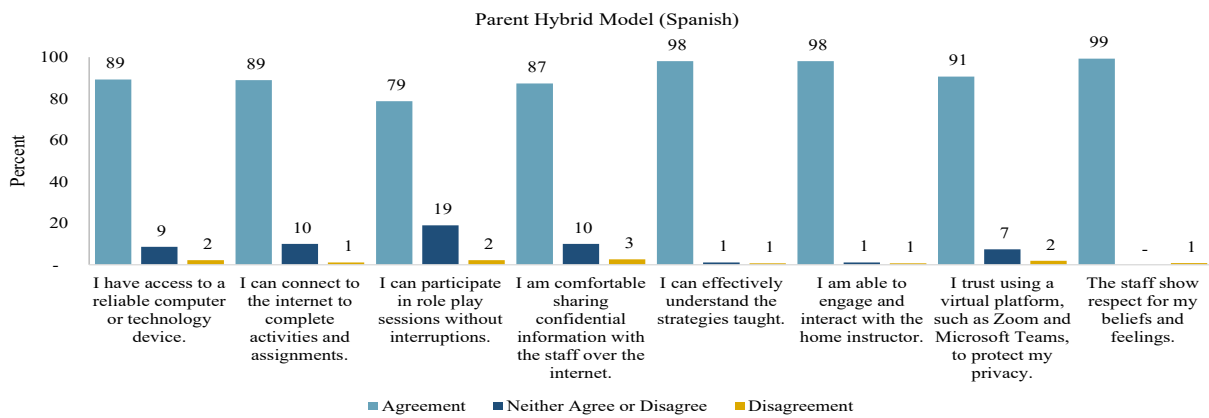
Appendix D

HISD HIPPY Activities and Field Trips, 2020-2021				
Date	Location	Number of Adults Invited	Number of Children Invited	Number of Attendees Present
10/29/2020	Teams – Welcome to the HIPPY Program – Spanish		25	66
10/29/2020	Teams – Welcome to the HIPPY Program - English		14	43
11/19/2020	Teams – Coping with Stress – English		26	26
11/19/2020	Teams – Coping with Stress - Spanish		27	69
12/17/2020	Teams – Holliday Fun at Home		74	139
1/28/2021	Teams – Soccer Starts at Home		54	107
3/24/2021	Teams – How to Buy a House		26	52
4/21/2021	Teams - Careers in Educations		24	68
5/15/2021	Teams - Annual Fatherhood Event	45	39	93
5/27/2021	Y3 Back to School Event	127	123	307
5/28/2021	EOY – MLK ECC	86	76	208
6/2/2021	EOY – Sutton	49	43	113
6/3/2021	EOY – Berry ES	11	11	34
6/4/2021	EOY – East Field Office	58	53	183
6/5/2021	EOY- East Field Office	40	35	136
6/8/2021	EOY – Fonwood ECC	16	12	36
6/9/2021	EOY – Energy HS	27	25	55
6/9/2021	EOY – Farias ECC	24	21	79
6/10/2021	EOY – East Field Office	21	21	29
6/16/2021	EOY – East Field Office	6	5	6
Total		510	734	1,849

Appendix E



Parents' perceptions of the HIPPY hybrid model (English), 2020–2021



Parents' perceptions of the HIPPY hybrid model (Spanish), 2020–2021

Appendix E (cont'd)

Virtual Survey Results (English)						
	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Total
(N = 182)						
I have access to a reliable computer or technology device.	74.7	20.3	4.4	0.5	0.0	99.9
I can connect to the internet to complete activities and assignments.	73.6	22.0	3.8	0.5	0.0	99.9
I can participate in role play sessions without interruptions.	56.6	28.0	13.2	2.2	0.0	100.0
I am comfortable sharing confidential information with the staff over the internet.	42.9	24.2	21.4	11.0	0.5	100.0
I can effectively understand the strategies taught.	74.7	24.7	0.5	0.0	0.0	99.9
I am able to engage and interact with the home instructor.	78.6	20.3	0.5	0.5	0.0	99.9
I trust using a virtual platform, such as Zoom and Microsoft Teams, to protect my privacy.	51.1	31.9	12.6	2.7	1.6	99.9
The staff show respect for my beliefs and feelings.	82.4	17.6	0.0	0.0	0.0	100.0

Virtual Survey Results (Spanish)						
	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Total
(N = 269)						
I have access to a reliable computer or technology device.	49.4	39.8	8.6	1.1	1.1	100.0
I can connect to the internet to complete activities and assignments.	48.0	40.9	10.0	0.4	0.7	100.0
I can participate in role play sessions without interruptions.	38.3	40.5	19.0	1.5	0.7	100.0
I am comfortable sharing confidential information with the staff over the internet.	45.7	41.6	10.0	1.5	1.1	99.9
I can effectively understand the strategies taught.	56.5	41.6	1.1	-	0.7	99.9
I am able to engage and interact with the home instructor.	57.2	40.9	1.1		0.7	99.9
I trust using a virtual platform, such as Zoom and Microsoft Teams, to protect my privacy.	45.7	45.0	7.4	0.4	1.5	100.0
The staff show respect for my beliefs and feelings.	71.0	28.3	-	0.4	0.4	100.1

Appendix F

CIRCLE Assessment Results, Beginning-of-Year and End-of-Year, 2020-2021											
Language		Non-HIPPY					HIPPY				
	Literacy	Total Tested *	BOY		EOY		Total Tested*	BOY		EOY	
		N	n	%	n	%	N	n	%	n	%
English	Rapid Letter Naming	5,848	2373	40.6	3867	66.1	55	28	50.9	38	69.1
	Rapid Vocabulary	5,848	1560	26.7	2036	34.8	55	18	32.7	13	23.6
	Syllabication	5,848	922	15.8	3480	59.5	55	9	16.4	29	52.7
Spanish	Rapid Letter Naming	3,976	1006	25.3	2977	74.9	67	29	43.3	56	83.6
	Rapid Vocabulary	3,976	725	18.2	2306	58.0	67	17	25.4	51	76.1
	Syllabication	3,976	600	15.1	2941	74.0	67	14	20.9	50	74.6
	Math										
English	Counting Sets	5,239	2,003	38.2	4,114	78.5	48	20	41.7	38	79.2
	Number Naming	5,239	2,235	42.7	4,026	76.8	48	24	50.0	39	81.3
	Rote Counting	5,239	1,085	20.7	3,476	66.3	48	11	22.9	33	68.8
Spanish	Counting Sets	4,030	1,053	26.1	3,388	84.1	66	22	33.3	60	90.9
	Number Naming	4,030	1,127	28.0	3,250	80.6	66	27	40.9	56	84.8
	Rote Counting	4,030	337	8.4	2,686	66.7	66	7	10.6	48	72.7
*Total Tested includes students who were administered the test at middle-of-year (MOY); therefore BOY and EOY n's do not equal Total Tested											

Appendix G

The PICCOLO is scored on 29 behaviors in the following four domains.

- *Affection*: Warmth, physical closeness, and positive expressions toward child (7 items);
 - *Responsiveness*: Responding to child's cues, emotions, words, interests and behaviors (7 items);
 - *Encouragement*: Active support of exploration, effort, skills, initiative, curiosity, creativity, and play (7 items); and
 - *Teaching*: Shared conversation and play, cognitive stimulation, explorations, and questions (7 items).
- Items are scored on the following scale: as 0 = absent (behavior not observed), 1 = barely (brief, minor, or emerging behavior observed), or 2 = clearly (definite, strong, or frequent behavior observed). Assessors added the scores for each item to calculate a domain score. No overall score is calculated for this assessment. The maximum domain score for each domain was 14. There were 160 children with both pre and post-PICCOLO scores.

Appendix H

Survival Analysis using Kaplan-Meier, Events				
HIPPY(1) vs. Non-HIPPY(0)	Total N	N of Events	N Censored	% Censored
0	8127	6796	1331	16.4%
1	254	197	57	22.4%
Overall	8381	6993	1388	16.6%

Survival Analysis using Kaplan-Meier, Mean Survival Time					
HIPPY(1) vs. Non-HIPPY(0)	Mean Survival Time		95% Confidence Interval		Median
	Estimate	Std. Error	Lower Bound	Upper Bound	
0	3.348	.008	3.332	3.364	3.00
1	3.236	.027	3.184	3.289	3.00

Survival Analysis using Kaplan-Meier, At risk vs. Not at Risk			
At Risk	HIPPY(1) vs. Non-HIPPY(0)	Total N	N of Events
.0	0	1182	1182
	1	24	24
	Overall	1206	1206
1.0	0	6945	6945
	1	230	230
	Overall	7175	7175
Overall	Overall	8381	8381

Survival Analysis using Kaplan-Meier, Mean Survival Time					
At Risk	HIPPY(1) vs. Non-HIPPY(0)	Mean Survival Time			
		Estimate	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
0	0	3.294	0.013	3.268	3.32
	1	3.583	0.103	3.382	3.785
	Overall	3.3	0.013	3.274	3.326
1	0	3.147	0.004	3.139	3.156
	1	3.196	0.026	3.144	3.247