

MEMORANDUM

October 26, 2020

TO: Margarita Gardea
Officer, Elementary Curriculum and Development

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

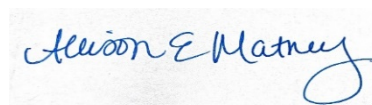
SUBJECT: **IMPROVING SCHOOL READINESS DURING THE CORONAVIRUS PANDEMIC THROUGH HOME INSTRUCTION FOR PARENTS OF PRESCHOOL YOUNGSTERS (HIPPI) AND THE DEPARTMENT OF FAMILY AND PROTECTIVE SERVICES TEXAS HOME VISITING GRANT, 2019–2020**

Attached is a copy of the HIPPI program evaluation for the 2019–2020 academic year. The evaluation measured the academic performance of HISD students whose parents participated in HIPPI using the 2019–2020 kindergarten Logramos and Iowa assessments and the prekindergarten CIRCLE assessments. Parents' perceptions of their child's developmental progress and parenting skills were also measured using the PICCOLO and ASQ.

Key findings include:

- HIPPI kindergarten students attained higher mean normal curve equivalent (NCE) scores on the Spanish language Logramos reading and mathematics subtests, but lower mean NCE scores on comparable English language Iowa subtests compared to the district.
- Substantial increases were observed in the percentage of HIPPI prekindergarten students who met benchmarks from BOY to MOY on CIRCLE English and Spanish literacy and mathematics assessments (identification of letters in the alphabet, expressive vocabulary skills, understanding sounds in their own language, and early mathematical skills).
- Difference-in-Differences (DiD) analyses revealed that Non-HIPPI participants would have experienced additional boosts in school readiness had they participated in HIPPI based on Spanish literacy subtests, Spanish mathematics subtests, and English mathematics subtests results.
- Paired t-test analyses of PICCOLO results revealed statistically significant increases in parents' perceptions of their skills to support their child's development due to HIPPI.
- ASQ paired results revealed substantial decreases in the percentage of parents who were concerned about their child's developmental progress from pre- to post-test.

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: Grenita Lathan
Silvia Trinh

Yolanda Rodriguez
Marisol Castruita

Maria Gabriella Hernandez
Walter Sampson, Sr.



RESEARCH

Educational Program Report

**IMPROVING SCHOOL READINESS
DURING THE CORONAVIRUS PANDEMIC
THROUGH HOME INSTRUCTION FOR PARENTS OF
PRESCHOOL YOUNGSTERS (HIPPI) AND THE
DEPARTMENT OF FAMILY AND PROTECTIVE
SERVICES TEXAS HOME VISITING GRANT,
2019-2020**

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EVALUATION REPORT

BUREAU OF PROGRAM EVALUATION

Improving School Readiness During the Coronavirus Pandemic through Home Instruction for Parents of Preschool Youngsters (HIPPY) and the Department of Family and Protective Services Texas Home Visiting Grant, 2019–2020

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

Abstract

HIPPY targeted over 600 parents of children zoned to 103 Houston Independent School District (HISD) elementary campuses during the 2019–2020 academic year. Due to the coronavirus pandemic, the program was delivered in a virtual format, beginning in March 2020, with the majority of parents successfully completing the 30-week program in 26 weeks. Notable findings were that HIPPY kindergarten students attained higher mean normal curve equivalent (NCE) scores on the winter administration of the Spanish language Logramos reading and mathematics subtests compared to the district, but lower mean scores on the English language Iowa reading and mathematics subtests than the district. Substantial increases were observed relative to the percentage of HIPPY prekindergarten students who met benchmarks from BOY (baseline) to MOY on CIRCLE English and Spanish literacy and mathematics assessments. CIRCLE demonstrated students' ability to identify letters in the alphabet; expressive vocabulary skills; understanding of sounds in their own language; and early mathematical skills, such as counting, identification of patterns, and recognition of shapes. Difference-in-Differences (DiD) analyses indicated that Non-HIPPY participants would have experienced additional boosts in school readiness had they participated in HIPPY, ranging from 1.9 to 7.6 percentage points on Spanish literacy subtests; 1.1 to 10.8 percentage points on Spanish mathematics subtests, and 0.7 to 3.8 percentage points on English mathematics subtests. Paired t-test analyses of PICCOLO results revealed statistically significant increases in parents' perceptions of their parenting skills in the areas of Teaching, Responsiveness, and Encouragement. The Ages & Stages Questionnaire (ASQ) revealed substantial decreases in the percentage of parents who were concerned about their child's developmental progress from pre- to post-test. There was evidence that HIPPY has expanded its reach to more diverse populations. Additional parental support by staff to the more diverse population may leverage the full impact of the program to all HIPPY children.

Introduction

The extent that young children are academically prepared for school may be strongly influenced by learning opportunities provided to them in the home (Barnett, Roost, & McEachran, 2012; Barton, 2016; Kagitcibasi, Sunar, & Bekman, 2001). Moreover, the quality of shared learning activities between parent and child are pivotal toward ensuring that the child successfully transitions from the home environment to their primary years of school and beyond (Foster et al., 2005; Tudge et al., 2003). It is evident that parents play an important role toward building school readiness skills of their preschool children (Hilado, Kallemeyn, & Phillips, 2013).

The Houston Independent School District (HISD) has made a long-term investment in programs, such as the Home Instruction for Parents of Preschool Youngsters (HIPPY) (Figure 1), that seek to reduce the impact of social inequalities often experienced among urban



Figure 1: HIPPY child engaged in interactive play on a field trip sponsored through a partnership with the Houston Children's Museum. Bus services were also provided.



Figure 2: HIPPY child displaying art project after Story Time at Hiram Clarke Multi Service Center (Vinson Library). This partner provides a safe, comfortable environment for families to attend group meetings, receive resources, and engage in interactive activities with their children.

school children. HIPPY provides parents with evidence-based resources to stimulate positive social interactions among parent and child, while building confidence in parents as the child’s first and most significant teacher (Figure 2). By strengthening parents’ self-efficacy, parenting style, the learning environment at home, networking skills, and social connectedness, this home visiting model has been found to boost children’s interest in learning, cognitive ability, and social-emotional adjustment to maximize their school performance (Barnett, Roost, & McEachran, 2012). HIPPY is aligned to the governor of Texas’ priority for developing a better education system for all children (The State of Texas, 2015).

Background

HIPPY was initiated in HISD during the 1993–1994 school year. The number of targeted schools and the communities that HIPPY serves has steadily increased over the years. Appendix A (p. 14) lists the schools where HIPPY programs were implemented during the current year, while Figure 3 depicts the number of HIPPY schools based on funding source. A geographical depiction of school locations is shown in Appendix B (p. 15). It should be noted that Title I and the Texas Home Visiting grant staff operated jointly at two HISD schools. Consequently, 103 schools were served by HIPPY.

Over the years, targeted HIPPY parents had preschool children

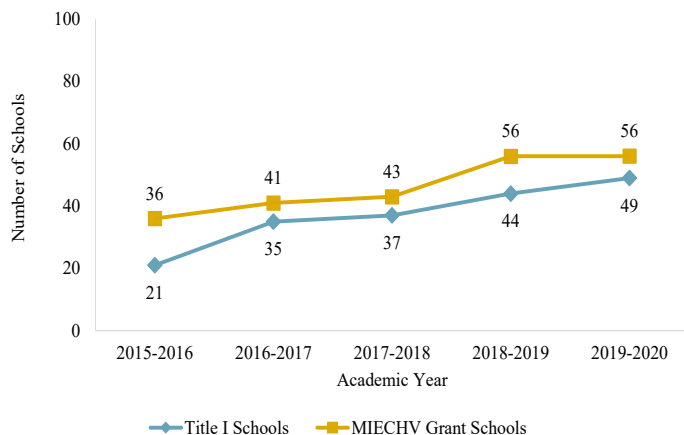


Figure 3: HISD Title I vs. Home Visting Grant HIPPY School Sites, 2019–2020 (Note: The 2019-2020 data reflects duplicate results; two schools were served by both Title I and Texas Home Visiting Grant staff.)

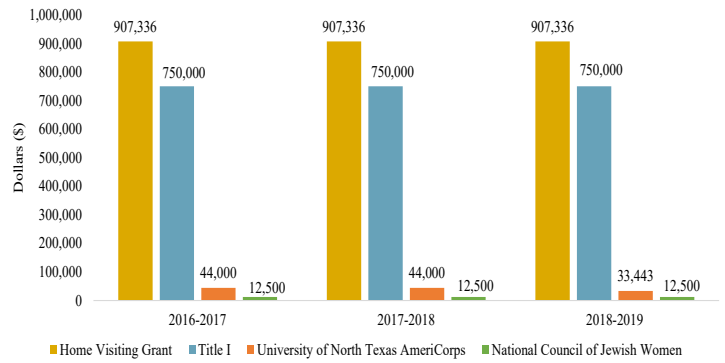


Figure 4a: Funding sources, 2016–2017 to 2019–2020

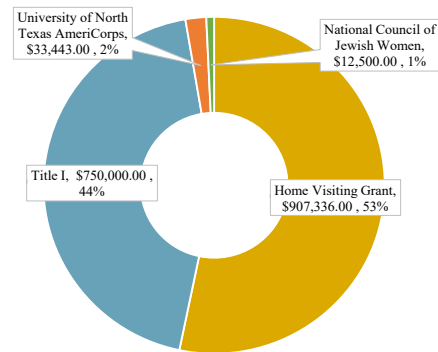


Figure 4b: Proportion of HIPPY funding sources, 2019–2020

ages three to five years old, with focused recruitment on parents with three-year-old children. During the 2019–2020 school year, the program recruited two-year old children and their parents.

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 4a). During the 2019–2020 academic year, 53% of the funding was provided by the Texas Home Visiting grant, 44% by Title I, 2% by Texas AmeriCorps, and 1% by the National Council of Jewish Women (Figure 4b). Home Visiting Grant funding allowed for program expansion, beginning in the 2015–2016 academic year (Figure 5). At the state level, the home visiting grant is funded by the Texas Health and Human Services Commission.



Figure 5: HIPPY child participating in a group art activity at the Houston Children’s Museum



Figure 6: HIPPY Theoretical Model

The HIPPY Theoretical Model

The U.S. Department of Health and Human Services (2017) identified four central components of HIPPY, which are shown in **Figure 6**. Texas HIPPY adds that 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 HIPPY program components are presented below to reflect the alignment of the HIPPY model to the components.

The HIPPY Curriculum

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 is, traditionally, delivered using a 30-week activity packet with approximately 10 activities for parents and children. 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 successfully 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 7 and 8**).

During the 2019–2020 academic year, the coronavirus pandemic changed how HIPPY was delivered to families. This change occurred in March 2020. Six coordinators and the Title 1 program manager surveyed over 600 HIPPY families to discuss continuation of the program virtually. A total of 340 families agreed to participate in the virtual format. Connelly Publishing provided the electronic format of the curriculum, which was distributed to HIPPY parents. The staff modeled the curriculum on a weekly basis. Parents successfully completed the program at Week 26.

Home Instructors and Program Coordinator

A typical home instructor provided services to approximately 16 parents. The home instructor’s main responsibility was to deliver the curriculum to his/her assigned parents. Home



Figure 7: HIPPY families meet at Baker Ripley Gulfton location to share Story Time and participate in learning activities

instructors utilized a hybrid model during the 2019–2020 academic year. Specifically, they engaged parents in face-to-face activities prior to mid-March 2020 and virtual activities after mid-March 2020. 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. All home instructors were parents who had young children attending the school to which they were assigned. There were two HIPPY program managers, one for the Title I-funded program



Figure 8: HIPPY children being read to by a HIPPY coordinator at Baker Ripley Gulfton location during Story Time

and one for 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 trainings and recruited guest speakers to improve program implementation.

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 2019–2020 academic year, including the

- Annual Kickoff Agenda for all Texas HIPPY personnel, Sky Ranch in Ban, Texas, November 2019,
- Virtual Coordinators' Retreat, August 10–14, 2020, and the
- Virtual HIPPY National Conference, HIPPY USA May 14–15, 2020 (mandatory for administrators and coordinators at the national level).

HIPPY Advisory Board

During the 2019–2020 academic year, HIPPY had a 21-member Advisory Board consisting of principals, assistant principals, HISD Board members, HISD administrative staff, community leaders, and parents. The Advisory Board was developed to help 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 special events, guest speakers, and special needs; and fostering cooperative working relationships with resource agencies, the community, volunteer groups, and other early childhood/family support programs.

Little Learners 2 (LL2)

LL2 was initiated during the 2018–2019 school year. The program was designed for parents of two-year old children. HIPPY USA provided a special curriculum for the children. These children completed 22 lessons using the same role-play, home-based techniques, and academic focus areas as the traditional HIPPY program. The Title 1 Manager assisted with the revision of the Spanish curriculum. The 2019–2020 academic year was the third year of LL2 implementation. Beginning in the 2020–2021 academic year, LL2 will be fully integrated in the HIPPY curriculum.

Home Visiting Grant Framework Early Childhood Coalition

The Texas Home Visiting Grant utilized an existing local early childhood coalition, Early Matters. Early Matters has 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 businesses, 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.

Sustainability

The local early childhood coalition worked to strategically design and implement a local sustainability plan. The local sustainability plan enabled the local early childhood coalition to effectively leverage state and federal funds to ensure continued financial support beyond the initial state and federal investments. HISD networked with different communities to identify champions that were sensitive to the goals of the program. An Advisory Board was established to identify stakeholders to engage in the process, including the National Council of Jewish Women, the Third Ward Fellowship of Churches, and local businesses.

Coordinated System of Referrals

The local early childhood coalition coordinated cross-sector services and addressed broader community-level issues for young children and families. Coordinated services included home visiting, mental health, employment, and education. To improve service coordination, the coalition developed a referral system to ensure that families could easily access services to best meet their needs, identify community-wide recruitment and retention strategies, and streamline intake processes. HISD helped to develop a user-friendly website, where all available resources related to housing, domestic violence, and mental health, for example, are stored. Home visitors shared these resources with families in their homes.

Research Questions:

1. What were the participation trends of HIPPY children over the past eight years (2012–2013 through 2019–2020)?
2. What instructional resources were provided to HIPPY parents to prepare their children for school?
3. How did students whose parents participated in HIPPY over the past four years perform on the winter 2019 administration of Logramos and Iowa assessments?
4. How did HISD prekindergarten students whose parents participated in HIPPY during the 2019–2020 academic year perform on the 2019 CIRCLE assessment?
5. To what extent did HIPPY support the development of parenting skills among program participants based on the PICCOLO and the ASQ assessments?

Review of the Literature

The research supports the belief that children who are adequately prepared before preschool perform better in school (Engle et al., 2007; La Paro & Pianta, 2000). School success encompasses 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). 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, Bradley, 2005;

Henderson & Mapp, 2002). This point is further emphasized in brain development research conducted by Hilado, Kallemeyn, and Phillips (2013). The research also shows that the earlier in a child's educational process parent engagement begins, the more powerful the effects (Kagitcibasi, Sunar, & Bekman, 2001).

Research conducted in a Texas HIPPPY program found significantly higher mathematics achievement of HIPPPY children compared to low-income Latino third graders who did not participate in the program (Nievar, Jacobson, Chen, Johnson, & Dier, 2011). 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 in Arkansas (Bradley & Gilkey, 2002). 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 found 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.

The "cost-effectiveness" of early interventions in the home have 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) found a few studies with credible evidence that early intervention for economically-disadvantaged children can be a positive economic investment for communities.

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 HIPPPY during the 2019–2020 academic year was acquired from HIPPPY 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 2019–2020 HIPPPY student cohort. Similar procedures were conducted to create student cohorts in previous years. Longitudinal data from 2012–2013 to 2019–2020 are presented in **Appendix C** (p. 16).

Data Collection and Analyses

Academic achievement measures included the winter 2019 Logramos and Iowa assessments for kindergarten students whose parents participated in HIPPPY during the 2019–2020 academic year. The sample consisted of 197 HIPPPY students on the Logramos language arts assessment and 202 students on the Logramos mathematics assessment. Results for 23 HIPPPY students on both the ELA Total and the Mathematics Iowa assessments were included in the analysis. Performance comparisons between the district and

HIPPPY were made using normal curve equivalents (NCEs). 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 were used to measure literacy, mathematics, and school readiness of HIPPPY children. The assessment has demonstrated high reliability and validity in multiple research studies (Children's Learning Institute, 2016). During the 2019–2020 academic year, only Wave 1 (BOY) and Wave 2 (MOY) were administered due to the interruption in the school year, which prevented the administration of Wave 3 (EOY). Only students with measures at the two points in time were used in the analyses. Results were captured on the English and Spanish language versions of the CIRCLE assessments. Difference-in-differences (DiD) analysis was conducted to determine the impact of HIPPPY compared to Non-HIPPPY students from BOY (baseline) to MOY.

The evaluation captured data from two parent assessment tools. 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). 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). The Ages & Stages Questionnaire (ASQ:SE and ASQ-3) measured the child's developmental progress based on parents' perceptions (Squires, Bricker, Twombly, Squires, & Jane, 2002). ASQs identified parents' concerns and helped to reassure parents that their child behavior is developmentally appropriate. Pre- and post- paired t-test analyses, correlation analyses, and effect size computations, were used to determine HIPPPY impact. The level of statistical significance was $p < .05$.

Study Limitations

There were several limitations of this evaluation. Specifically, HIPPPY students were identified based on background information, such as their name and birth date. This information was extracted from HIPPPY 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 was only presented for students who were verified through the Public Education Information Management System (PEIMS). Collaboration with HIPPPY staff and HISD Instructional Technology department staff helped to mitigate this limitation.

What were the participation trends of HIPPPY children over the past eight years (2012–2013 through 2019–2020)?

Figure 9 (p. 6) presents the total number of children whose parents participated in HIPPPY over the past eight years, including the number of children who were enrolled in HISD elementary schools. It is evident that HIPPPY participation has increased over the past two years, with 518 students during the 2018–2019 academic year and 694 children during the 2019–2020 academic year. A total of 269 students compared to 338 students were

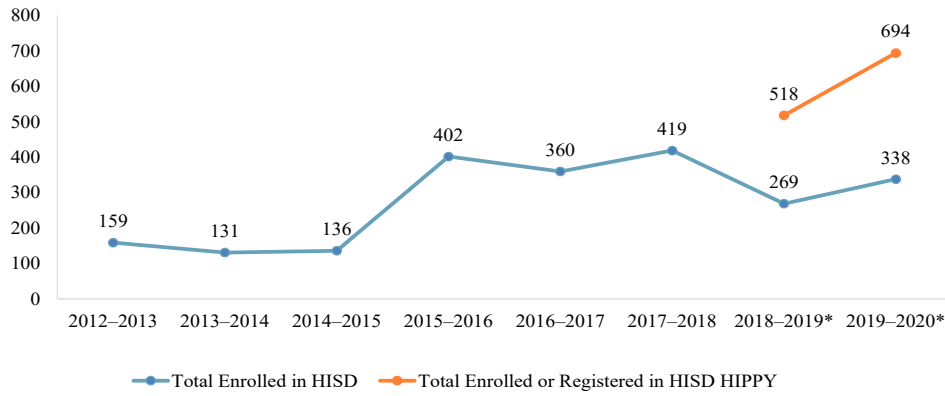


Figure 9: Total number of HIPPY children enrolled in HISD schools compared to the total number of children who were enrolled and registered in HIPPY, 2012–2013 through 2019–2020

registered or enrolled in HISD schools in the respective years.

Appendix C provides trend analysis for the program (p. 16). A comparison of HIPPY children demographic characteristics reveal that the proportion of males and females have been similar over the past two years (about 47.0 percent vs. 3.0 percent). There has been an increase in the percentages of limited English (64.7 percent vs. 69.8 percent), and economically-disadvantaged (95.9 percent vs. 97.9 percent) students. Slightly more than 70.0 percent of HIPPY students were enrolled in prekindergarten (71.0 vs 73.4%). **Figure 10** reveals that HIPPY students have been predominately Hispanic over the past eight years, and represented 86.2 percent vs. 85.2 percent of the population over the past two years. There has been an increase in the percentage of African American students whose parents participated in the program in 2018–2019 compared to 2019–2020 (11.9 percent vs.12.4 percent).

What instructional activities were provided to HIPPY parents to prepare their children for school?

HIPPY home instruction lessons encompassed academic and social/emotional activities (**Appendix D**, p. 17). In addition, physical activities were introduced to strengthen the children’s fine and gross motor skill 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 HIPPY summer program was modified during the 2019–2020 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 approximately 500 packets.

The coronavirus also impacted how HIPPY conducted the annual End-of-Year HIPPY Celebrations. This event provided parents and their children with a sense of accomplishment for their challenging work throughout the school year. During the 2017–2018 academic year, the program increased the number of Celebrations to accommodate lower numbers of families in more personable settings. Approximately 22 Celebrations occurred, with over 1,500 attendees (**Figure 11**, p. 7). The number of attendees to the Celebrations increased in 2018–2019 from the previous year to 2,036. During the 2019–2020 academic year, 1,995 HIPPY children and their families were provided educational materials at the end of the year in lieu of the annual HIPPY Celebrations.

How did students whose parents participated in HIPPY over the past four years perform on the winter 2019 administration of Logramos and Iowa assessments?

Figure 12 (p. 7) presents the winter 2019 mean Normal Curve Equivalent (NCE) scores for kindergarten students whose parents participated in HIPPY during the 2016–2017 through the 2019–2020 academic years compared to kindergarten

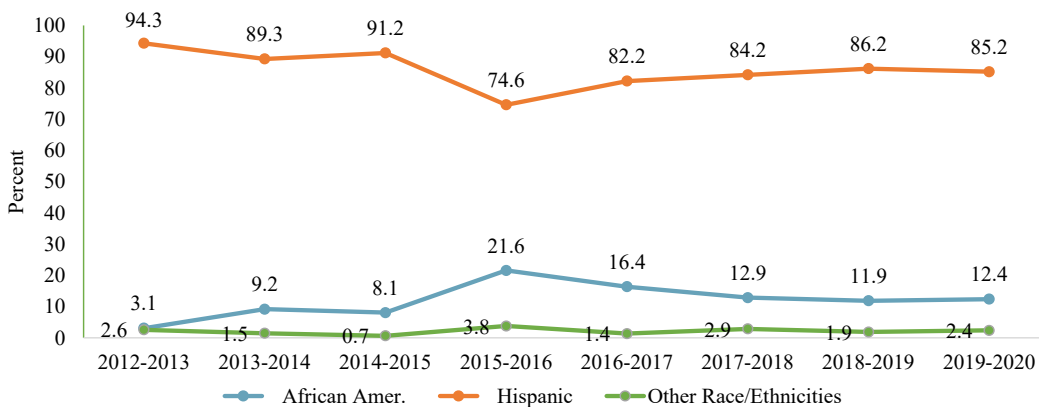


Figure 10: Percent children whose parents participated in HIPPY by race/ethnicity, 2012-2013 through 2019–2020

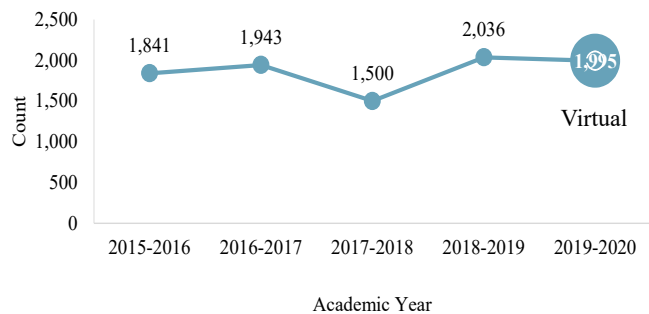


Figure 11: Number of adults and children who participated in the HIPPY End-of-Year Celebrations, past five years

students districtwide on the Logramos language arts (LA Total) and mathematics assessments. The sample size was 197 HIPPY students on the language arts assessment and 202 students on the mathematics assessment. Districtwide results included 4,613 students on the language arts assessment and 4,776 students on the mathematics assessment. It is evident that students whose parents participated in HIPPY outperformed students districtwide, as evidenced by higher mean NCEs in language arts (48.9 NCE vs. 41.9 NCE) and in mathematics (49.4 NCE vs. 42.8 NCE).

Iowa English language arts (ELA Total) and mathematics assessment results for kindergarten students whose parents participated in HIPPY during the 2016–2017 through the 2019–2020 academic years were compared with districtwide results using winter 2019 Iowa data (**Figure 13**). The sample included 23 HIPPY students on both the language arts and the mathematics assessments. Comparatively, districtwide results encompassed 8,980 students on the language arts and 9,256 students on the mathematics assessments. These results should be reviewed with caution due to the low sample sizes for HIPPY students. HIPPY students attained lower mean NCEs compared to the district on the language arts (44.7 NCE vs. 46.0 NCE) and the mathematics assessments (43.9 NCE vs. 46.5 NCE).

How did HISD prekindergarten students whose parents participated in HIPPY during the 2019–2020 academic year perform on the 2019 CIRCLE assessment?

CIRCLE results were used as a prekindergarten school readiness measure for HISD students whose parents participated in HIPPY during the 2019–2020 academic year. Wave 1 of CIRCLE was used as the baseline or the Beginning of the Year (BOY) measure and Wave 2 was used as the mid-year measure (MOY), considering that Wave 3 (EOY) was not administered in HISD

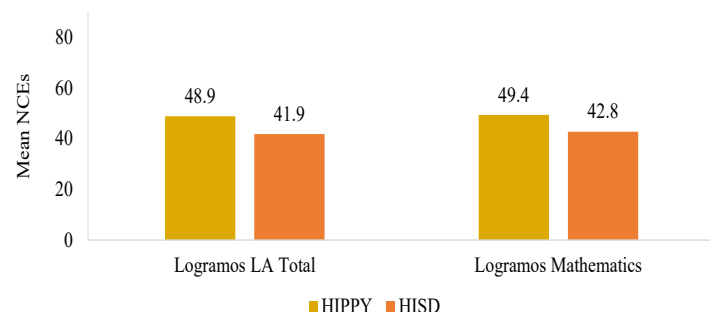


Figure 12: Logramos results for students whose parents participated in HIPPY between the 2016–2017 through 2018–2019 academic years

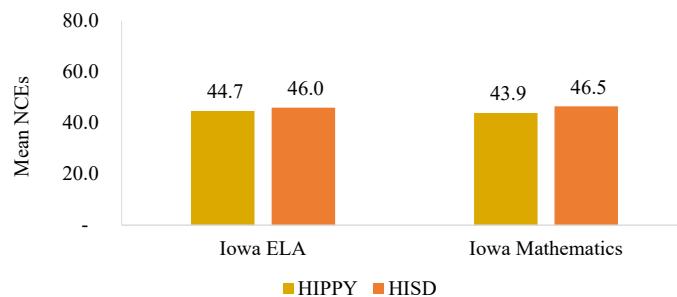


Figure 13: Iowa results for students whose parents participated in HIPPY between the 2016–2017 through 2018–2019 academic years

due to district closure. Key findings are presented. More details regarding CIRCLE, i.e., the number of students tested as well as BOY and MOY results can be found in **Appendix E** (p. 18).

The percent of HIPPY students who met the benchmark on the English literacy assessments at BOY and MOY are depicted in **Figure 14** for the 2019–2020 academic year. These assessments measured the child’s ability to identify letters in the alphabet, their expressive vocabulary skills, and ability to understand sounds in their own language.

Figure 14 shows increases in the percentage of students who met benchmark, from BOY to MOY, on all literacy subtests included in the analyses. At BOY, the highest percentage of students who met benchmark was on the Words in a Sentence subtest (14.1%), and the lowest percentage of students who met benchmark was on the Rapid Letter Naming subtest (12.8%). By MOY, the highest percentage of students who met benchmark was on the Words in a Sentence subtest (41.3%), and the lowest percentage of students who met benchmark was on the Rapid Letter Naming subtest (39.6%). The largest increase in the percentage of students who met benchmark, from BOY to MOY, was on the Rapid Vocabulary subtest (27.8 percentage points); whereas, the smallest increase was on the Rapid Letter Naming subtest (26.8 percentage points).

Figure 15 (p. 8) shows the performance of HIPPY students on 2019 Spanish literacy CIRCLE assessments. There was an increase in the percentage of students who met benchmark, from BOY to MOY, on all subtests in the analyses. At BOY, the highest percentage of students who met benchmark was on the Rapid Letter Naming, Words in a Sentence, Alliteration, and Syllabification subtests (10.5%), and the lowest percentage of students who met benchmark was on the Rapid Vocabulary subtest (10.4%). By MOY, the highest percentage of students who met benchmark was on the Words in a Sentence subtest (45.7%), while the lowest percentage of students who met benchmark was on the

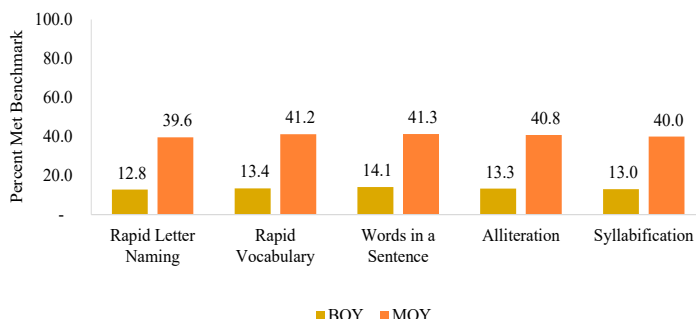


Figure 14: CIRCLE English literacy assessment results of HIPPY prekindergarten students, 2019–2020

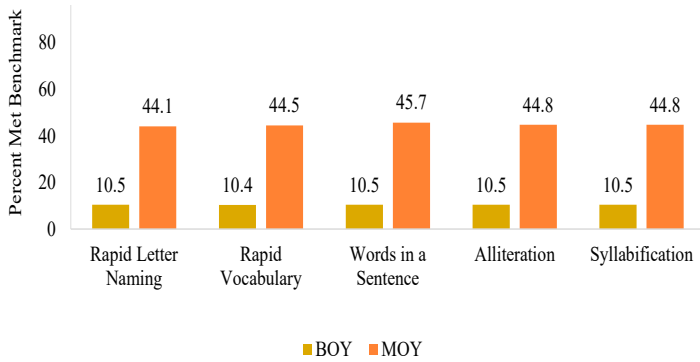


Figure 15: CIRCLE Spanish literacy assessment results of HIPPY pre-kindergarten students, 2019–2020

Rapid Letter Naming subtest (44.1%). The largest increase in the percentage of students who met benchmark, from BOY to MOY, was on the Words in a Sentence subtest (35.2 percentage points); whereas, the smallest increase was on the Rapid Letter Naming subtest (33.6 percentage points).

Figure 16 shows the performance of HIPPY students on 2019 English mathematics CIRCLE assessments. These assessments measured the children’s early mathematical skills, such as counting and identification of patterns and shapes. There was an increase in the percentage of students who met benchmark, from BOY to MOY, on all of the subtests. At BOY, the highest percentage of students who met benchmark was on the Rote Counting subtest (10.9%), and the lowest percentage of students who met benchmark was on the Shape Naming, Shape Discrimination, Number Naming, Number Discrimination, and Counting Sets subtests (9.9%). By MOY, the highest percentage of students who met benchmark was on the Patterns subtest (45.6%), and the lowest percentage of students who met benchmark was on all other subtests (44.4%). The largest increase in the percentage of students who met benchmark, from BOY to MOY, was on the Patterns subtest (35.5 percentage points); whereas, the smallest increase was on the Rote Counting subtest (33.5 percentage points).

Figure 17 shows the performance of HIPPY students on 2019 Spanish mathematics CIRCLE assessments. There was an increase in the percentage of students who met benchmark, from BOY to MOY, on all of the subtests. At BOY, the highest percentage of students who met benchmark was on the Shape Discrimination, Number Naming, Rote Counting, and Counting Sets subtests (18.1%), while the lowest percentage of students

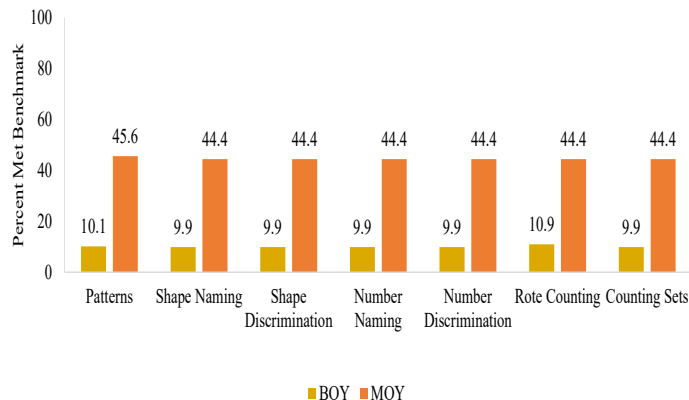


Figure 16: CIRCLE English mathematics assessment results of HIPPY pre-kindergarten students, 2019–2020

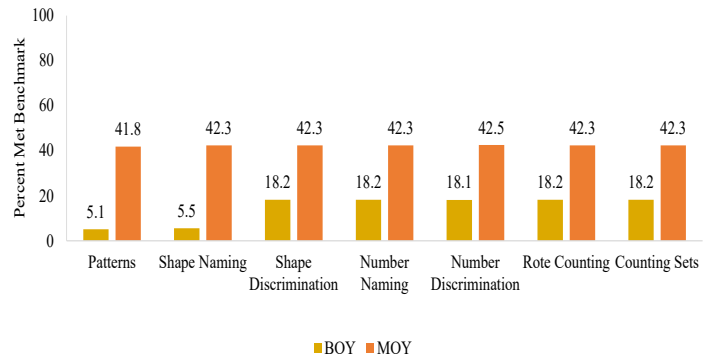


Figure 17: CIRCLE Spanish mathematics assessment results of HIPPY pre-kindergarten students, 2019–2020

who met benchmark was on the Patterns subtest (5.1%). By MOY, the highest percentage of students who met benchmark was on the Number Discrimination subtest (42.5%), and the lowest percentage of students who met benchmark was on the Patterns subtest (41.8%). The largest increase in the percentage of students who met benchmark, from BOY to MOY, was on the Shape Naming subtest (36.8 percentage points); whereas, the smallest increase was on the Shape Discrimination, Number Naming, Rote Counting, and Counting Sets subtests (24.1 percentage points).

A comparison of 2019 BOY and MOY CIRCLE performance of HIPPY students and students whose parents did not participate in HIPPY (Non-HIPPY) on reflected in **Appendix F** (pps. 19–20). A summary of the results are depicted in **Figure 18** (literacy, p. 9) and in **Figure 19** (mathematics, p. 9).

Although increases, from BOY to MOY, were evident for HIPPY and Non-HIPPY students on the English literacy assessments, there was a slightly higher increase in the percentage of Non-HIPPY students who met the benchmark from BOY to MOY on most of the English literacy subtests included in the analyses (Figure 18, p. 9). Higher increases in favor of Non-HIPPY students were evident on the English Syllabification (0.7 percentage points), Rapid Letter Naming (1.0 percentage points), Alliteration (1.2 percentage points), and Rapid Vocabulary (2.1) subtests. Non-HIPPY students achieved a substantially higher increase in their performance compared to HIPPY students on the Words in a Sentence subtest (6.4 percentage points).

On the Spanish literacy CIRCLE assessments, HIPPY students achieved higher gains in the percentage of students who met benchmark, from BOY to MOY, compared to Non-HIPPY students on four out of the five subtests included in the analyses (Figure 19, p. 9). The difference in favor of HIPPY students was evident on the Syllabification (7.3 percentage points), Rapid Letter Naming (1.9 percentage points), Rapid Vocabulary (3.4), and Words in a Sentence (7.6 percentage points) subtests. However, a higher increase in performance for Non-HIPPY students compared to HIPPY students over the same time period was found on the Alliteration subtest (1.5 percentage points).

While gains were achieved for HIPPY and Non-HIPPY students on the English mathematics assessments from BOY to MOY, there was a slightly higher increase in the percentage of HIPPY students who met the benchmark on most of the mathematics subtests included in the analyses. Higher increases, in favor of HIPPY students, was evident on the Counting Sets (1.5 percentage points), Number Naming (3.8 percentage points), Rote Counting (2.8 percentage points), and Shape Naming (0.7)

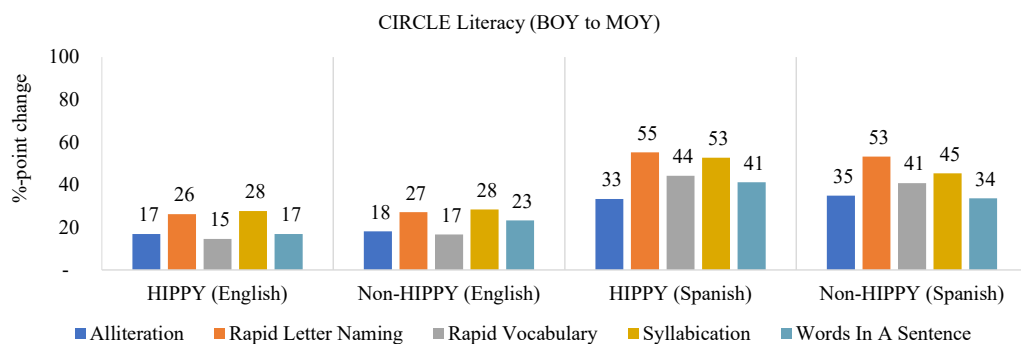


Figure 18: CIRCLE English and Spanish literacy results of HIPPY vs. Non-HIPPY students, 2019–2020

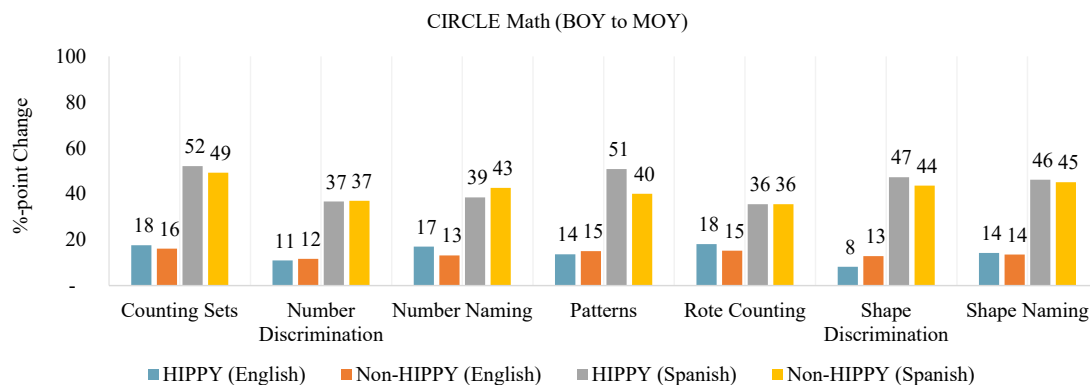


Figure 19: CIRCLE English and Spanish mathematics results of HIPPY vs. Non-HIPPY students, 2019–2020

subtests. In contrast, Non-HIPPY students achieved higher increases in their performance compared to HIPPY students on the Number Discrimination subtest (0.7 percentage points), Patterns (1.4 percentage points), and Shape Discrimination (4.6 percentage points) subtests.

Notable gains for HIPPY students were observed on the majority of Spanish mathematics assessments compared to Non-HIPPY students. Specifically, there were higher increases in the percentage of HIPPY students who met the benchmark, from BOY to MOY, on the Counting Sets (2.7 percentage points), Patterns (10.8 percentage points), Shape Discrimination (3.8 percentage points), and Shape Naming (1.1 percentage points) subtests. Both HIPPY and Non-HIPPY students made the same gain on the Rote Counting subtest from BOY to MOY. In contrast, Non-HIPPY students made larger gains on the Number Discrimination (0.3 percentage points) and the Number Naming (4.1 percentage points) subtests.

Figure 20 depicts the results of Difference-in-Differences (DiD) analyses to measure the impact of HIPPY participation using CIRCLE Spanish literacy assessments. Only subtests that yielded benefits are presented. Figure 20 reveals that HIPPY participation resulted in remarkable gains on the Rapid Letter Naming, Rapid Vocabulary, Syllabication, and Words in a Sentence subtests compared to Non-HIPPY participation. More specifically, non-HIPPY participants would have experienced additional boosts in their performance, ranging from 1.9 percentage points on the Rapid Letter Naming assessment to 7.6 percentage points on the Words in a Sentence assessment, if they had participated in HIPPY.

Figure 21 (p. 10) reflects the benefits of HIPPY participation using CIRCLE Spanish mathematics assessment results. DiD analyses revealed that HIPPY participation led to notable gains

on the Counting Sets, Patterns, Shape Discrimination, and Shape Naming subtests compared to Non-HIPPY participation. Non-HIPPY participants would have experienced additional boosts in their performance, ranging from 1.1 percentage points on the Shape Naming assessment to 10.8 percentage points on the Patterns assessment, if they had participated in HIPPY.

Figure 22 (p. 10) depicts the benefits of HIPPY participation using CIRCLE English mathematics assessment results. DiD analyses showed benefits in HIPPY participation on the Shape Naming, Counting Sets, Rote Counting, and Number Naming subtests. Non-HIPPY participants would have experienced additional gains in their performance, ranging from 0.7 percentage points on the Shape Naming assessment to 3.8 percentage points on the Number Naming assessment, if they had participated in HIPPY.

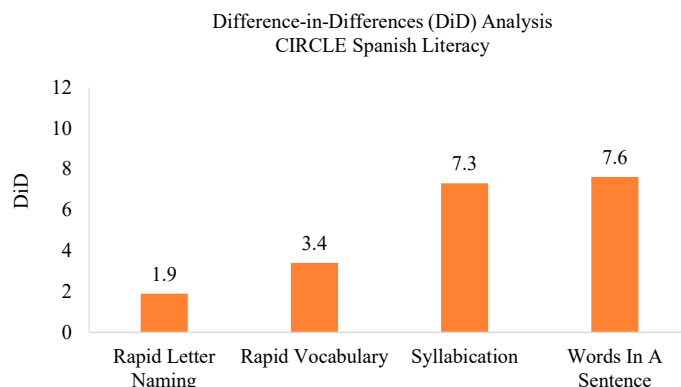


Figure 20: DiD analyses based on CIRCLE Spanish literacy assessments, HIPPY vs. Non-HIPPY program participation, 2019–2020

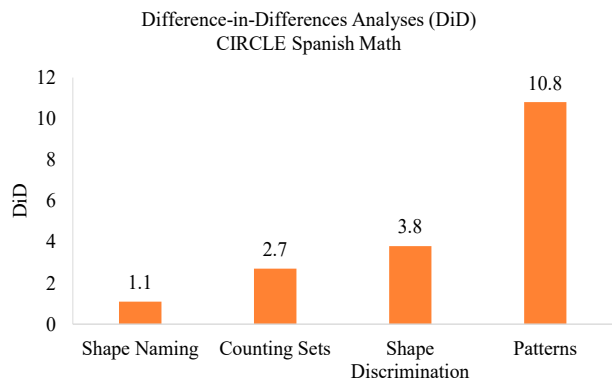


Figure 21: DiD analyses based on CIRCLE Spanish mathematics assessments, HIPPY vs. Non-HIPPY program participation, 2019–2020

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

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. The instrument was developed by Utah State University in partnership with Early Head Start programs as a tool for observing, tracking, and supporting parent-child interactions that lead to positive child outcomes from infancy to age three (Roggman, et al., 2009).

The PICCOLO was used to observe HIPPY parents 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).

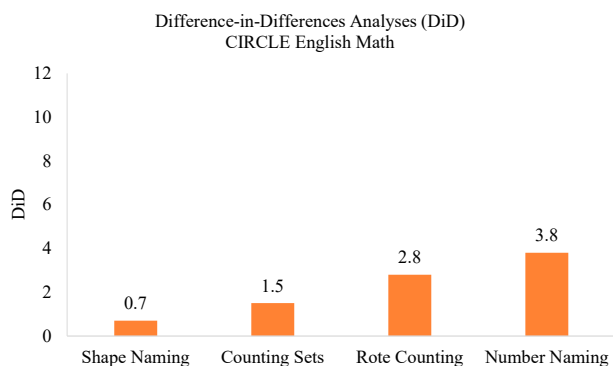


Figure 22: DiD analyses based on CIRCLE English mathematics assessments, HIPPY vs. Non-HIPPY program participation, 2019–2020

Table 1: Pearson product-moment correlation between measures of PICCOLO domains, 2019-2020

Scale	Pre-Post Correlation Coefficient	95% Confidence Interval (CI)	
		Lower	Upper
1. Affection	0.381**	0.238	0.532
2. Responsiveness	0.455**	0.259	0.489
3. Encouragement	0.534**	0.378	0.629
4. Teaching	0.415**	0.211	0.433

**p < .01 (2-tailed) (N = 160)

Items were 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.

Correlation analyses examined the strength of the pre-post relationships among the PICCOLO domains (**Table 1**). There were large, positive associations evident in the data, with the largest association found on the Encouragement domain, $r = .534$, $p < .01$. The second largest association was found on the Responsiveness domain, $r = .455$, $p < .01$.

Figure 23 shows increases on each domain from pre- to post-test. Paired t-test analyses revealed a statistically significant increase in the Teaching domain scores at the end of the program ($M = 12.9$, $SD = 2.5$) compared to the beginning of the program ($M = 12.2$, $SD = 3.2$), $t(160) = 3.0$, $p < .01$. A statistically significant increase was observed on the Responsiveness domain at the end of the program ($M = 11.9$, $SD = 2.4$) compared to the beginning of the program ($M = 11.2$, $SD = 1.9$), $t(160) = 3.7$, $p < .01$. Statistically significant results were also observed on the Encouragement domain at the end of the program ($M = 11.8$, $SD = 2.0$) compared to the beginning of the program ($M = 11.4$, $SD = 2.2$), $t(160) = 2.0$, $p < .01$. Hedges’ g was computed using the t-test values and the differences between pre- and post-test scores. HIPPY had a small effect on parental-child support related to Responsiveness ($d = 0.307$), Teaching ($d = 0.256$), and Encouragement ($d = 0.189$) (**Figure 24**, p. 10).

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 developmental concern rating of “pass”, “advanced”, or “concern”

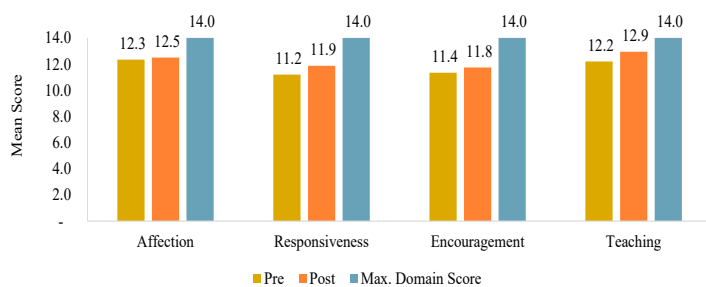


Figure 23: PICCOLO parent-child assessment results, 2019–2020

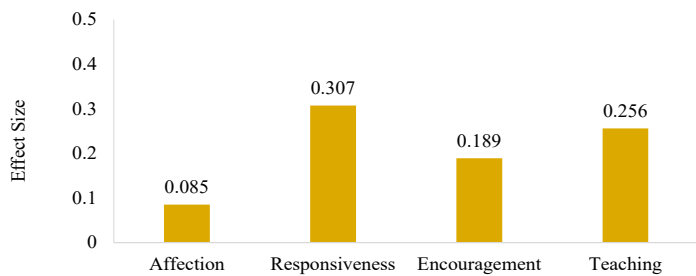


Figure 24: PICCOLO pre-post effect sizes, 2019–2020 (Effect size: 0.2 = small effect, 0.5 = moderate effect, and 0.8 = large effect (Rosenthal & Rosnow, 1991))

was extracted from the ASQ-3 dataset. In addition, parents were administered the ASQ-SE to detect social-emotional concerns. An overall social-emotional rating of “pass”, “advanced”, or “concern” for each child was extracted from the ASQ-SE dataset. The ASQ-3 and the ASQ-SE were, primarily, administered in January and February (pre-test) and in March and April (post-test). Due to the coronavirus, some parents completed the post-test in June 2020. Parents’ ratings were determined by several factors, including the child’s age and the developmental area measured. A total of 98 parents had both pre- and post-test ASQ-3 scores and 125 parents had both pre- and post-test ASQ-SE scores.

Figure 25 shows significant decreases, from pre-test to post-test, in the percentages of parents’ who indicated that they were concerned about their child’s development in the areas of communication, fine motor, gross motor, personal-social, and problem-solving. The highest decline was observed in the area of personal-social (9.2% to 1.0%). In general, parents’ concerns about their child’s development dropped from 20.4% to 11.2% from pre-test to post-test.

ASQ-SE results are also depicted in Figure 24. It is evident that at pre-test, 9.6% of parents were concerned about their child’s social-emotional development. Comparatively, at post-test, 4.0% of parents were concerned about their child’s social-emotional development.

Effect size analysis was conducted using the ASQ-SE results, considering that the most impact of HIPPY was observed in this area. **Figure 26** shows that the mean rating noting parents’ concern for their child’s social-emotional development decreased from 42.2 on the pre-test to 30.0 on the post-test. The scores ranged from 0 to 175 on the pre-test and from 0 to 150 on the post-test. The Hedges’ g was computed using the t-test values and the differences between pre- and post-test scores. HIPPY had a small effect on children’s social-emotional development ($d = 0.41$).

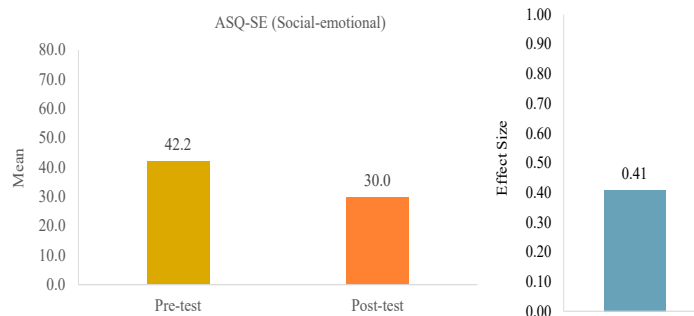


Figure 26: Mean ASQ-SE social-emotional paired t-test results and effect size

Discussion

HIPPY has been implemented in the Houston Independent School District for more than 10 years to assist economically-disadvantaged families with educational resources to prepare their preschool children for school. During the 2019–2020 academic year, HIPPY targeted over 600 parents whose children were zoned to 103 HISD elementary schools located within the 6 HISD Board district boundaries. Comparatively, 100 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 contributed about 3% of the \$1.7 million budget to HIPPY.

HIPPY program implementation was impacted by district closure in March 2020 due to the coronavirus pandemic. Six HIPPY coordinators and the Title 1 program manager surveyed over 600 HIPPY families to discuss continuation of the program virtually. A total of 340 families agreed to participate in the virtual format. The staff modeled the curriculum on a weekly basis, with parents successfully completing the 30-week program at Week 26. The End-of-Year Celebrations was continued by providing families with educational materials.

Over the past eight years, the vast majority of students whose parents participated in HIPPY was Hispanic. There was a slight increase in the proportion of African American, Asian, and White students whose parents participated in the program over the past two years. The increase in the proportion of limited English proficient, economically-disadvantaged, and at-risk students provided evidence that HIPPY continued to reach its targeted group and a more diverse population.

Academic performance of HIPPY students was assessed using the 2019 winter administration of Logramos and Iowa reading and mathematics assessments at the kindergarten level and the CIRCLE English and Spanish literacy and mathematics school

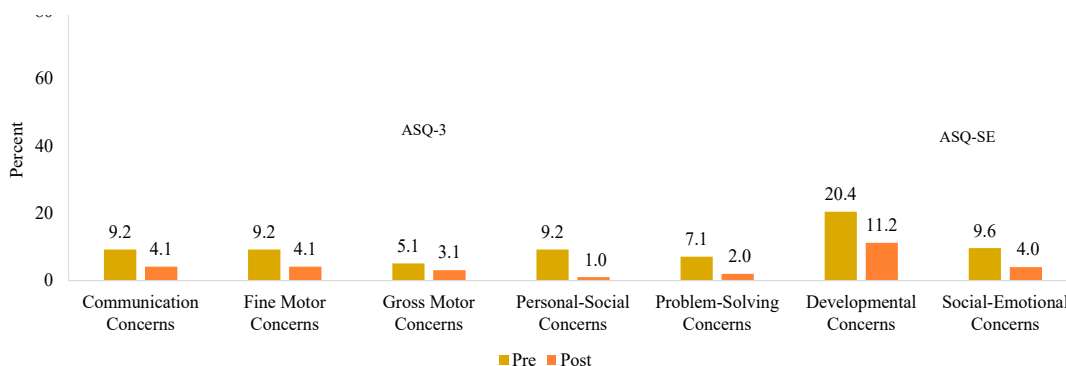


Figure 25: Ages & Stages Questionnaire (ASQ-3 and ASQ-SE) results, 2019–2020 (ASQ-3 n=98; ASQ-SE n = 125)

readiness assessments at the prekindergarten level. The state assessment, to measure the performance of third-grade students, was not administered during the current year due to the coronavirus pandemic. Notable findings included higher mean normal curve equivalent (NCE) scores for kindergarten HIPPY students on the Spanish language Logramos reading and mathematics subtests compared to the district, but lower scores on the English language Iowa reading and mathematics subtests compared to the district.

The CIRCLE assessment was only administered at BOY and MOY during the 2019–2020 academic year. The findings included substantially higher percentages of prekindergarten students who met benchmark from BOY to MOY on both the English and Spanish literacy and mathematics assessments. If this trend continued, a vast majority of students would have been school ready by the end of the academic year. Difference-in-Differences (DiD) analyses revealed that Non-HIPPY participants would have experienced additional boosts in school readiness if they had participated in HIPPY based on CIRCLE Spanish literacy, Spanish mathematics, and English mathematics assessment results. It may be important to track these students at kindergarten to determine whether positive patterns in their prekindergarten performance persist over time. Comparing the academic performance of the HIPPY cohort with other HISD students whose education was interrupted due to the pandemic may provide additional insight regarding the effectiveness of HIPPY.

Higher percentages of parents documented social-interactions with their child based on PICCOLA results. Moreover, the ASQ-3 and the ASQ-SE revealed substantial decreases in the percentages of parents who indicated that they were not concerned about their child's communication, fine motor, gross motor, problem solving, personal-social, and social-emotional development from pre- to post-test. Effect size analyses revealed that HIPPY had a small effect on the child's social-emotional development and a small effect on parental-child support related to Responsiveness, Teaching, and Encouragement.

Finally, the academic performance of HIPPY students on Spanish language assessments reflected notable improvements over students whose parents did not participate in HIPPY, and English language test takers. More intense focus may be needed to determine whether factors, such as cultural differences, have an impact on program delivery and the academic benefits experienced by HIPPY students. Expanded marketing strategies to reach more disadvantaged families may help to reduce school readiness gaps often experienced by disadvantaged children during their early years.

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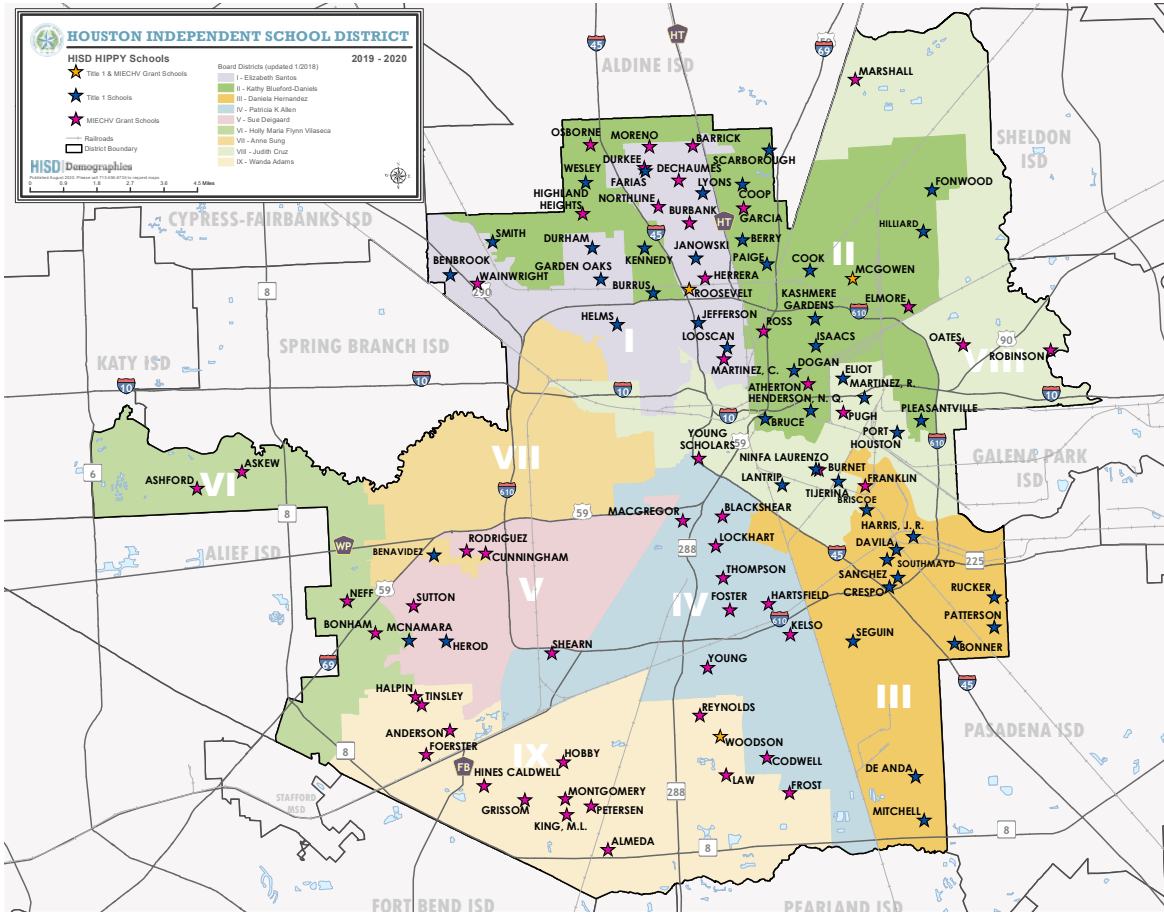
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Appendix A

2019-2020 HIPPY Title I Schools* (N=49)		2019-2020 HIPPY Texas Home Visiting Grant Schools* (N = 56)	
Benbrook ES	McNamara ES	Almeda ES	Lockhart ES
Berry ES	Mitchell ES	Anderson ES	MacGregor ES
Bonner ES	Ninfa Laurenzo EC	Askew ES	Marshall ES
Bruce ES	Paige ES	Ashford ES	Martinez, C. ES
Burrus ES	Patterson ES	Atherton ES	McGowen ES
Cook ES	Pleasantville ES	Barrick ES	Montgomery ES
Coop ES	Port Houston ES	Blackshear ES	Moreno ES
Crespo ES	Roosevelt ES	Bonham ES	Neff ES
Davila ES	Rucker ES	Burbank ES	Northline ES
De Anda ES	Sanchez ES	Burnet ES	Oates ES
Dogan ES	Scarborough ES	Codwell	Osborne ES
Durham ES	Seguin ES	Cunningham ES	Petersen ES
Eliot ES	Smith ES	DeChaumes ES	Pugh ES
Farias EC	Tijerina ES	Durkee ES	Reynolds ES
Fonwood EC	Wesley ES	Elmore ES	Robinson ES
Garden Oaks ES	Benavidez ES	Foerster ES	Rodriguez ES
Helms ES	Southmayd ES	Foster ES	Ross ES
Henderson, N.Q. ES	Hilliard ES	Franklin ES	Roosevelt ES
Herod ES	Briscoe ES	Frost ES	Shearn ES
Isaacs ES		Garcia ES	Sutton ES
Janowski ES		Grissom ES	Thompson ES
Jefferson ES		Halpin EC	Tinsley ES
JR Harris ES		Hartsfield ES	Wainwright ES
Kashmere Gardens		Herrera ES	Woodson ES
Kennedy ES		Highland Heights ES	Young ES
Lantrip ES		Hines Caldwell ES	Young Scholars ES
Looscan ES		Hobby ES	
Lyons ES		Kelso ES	
Martinez, R. ES		King, M.L. EC	
McGowen ES		Law ES	
* Total number of school served is 103 (McGowen ES and Roosevelt ES were served by both Title I and MIECHV staff)			

Appendix B



Appendix C

Demographic Characteristics of HISD Students Whose Parents Participated in HIPPY During Cohort Years, 2012-2013 through 2019-2020																
Academic Year	2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018		2018-2019*		2019-2020*	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total Enrolled in HISD	159	100.0	131	100.0	136	100.0	402	100.0	360	100.0	419	100.0	269	100.0	338	100.0
Gender																
Male	70	44.0	63	48.1	70	51.5	196	48.8	170	47.2	210	50.1	127	47.2	159	47.0
Female	89	56.0	68	51.9	66	48.5	206	51.2	190	52.8	209	49.9	142	52.8	179	53.0
Ethnicity																
Asian	1	0.6	2	1.5	0	-	3	0.7	0	-	2	0.5	2	0.7	4	1.2
African Amer.	5	3.1	12	9.2	11	8.1	87	21.6	59	16.4	54	12.9	32	11.9	42	12.4
Hispanic	150	94.3	117	89.3	124	91.2	300	74.6	296	82.2	353	84.2	232	86.2	288	85.2
White	2	1.3	0	-	0	-	11	2.7	4	1.1	7	1.7	1	0.4	3	0.9
Two or More Races	1	0.6	0	-	1	0.7	1	0.2	0	-	3	0.7	2	0.7	1	0.3
Grade																
EE	0	-	2	1.5	0	-	6	1.5	7	1.9	5	1.2	5	1.9	2	0.6
PK	134	84.3	90	68.7	82	63.2	312	77.6	256	71.1	281	67.1	191	71.0	248	73.4
K	25	15.7	39	29.8	49	36.0	72	17.9	80	22.2	102	24.3	70	26.0	87	25.7
First	0	-	0	-	1	0.7	5	1.2	12	3.3	17	4.1	1	0.4	1	0.3
Second	0	-	0	-	0	-	4	1.0	2	.6	9	2.1	-	-	-	-
Third	0	-	0	-	0	-	1	0.2	2	.6	3	0.7	-	-	-	-
Fourth	0	-	0	-	0	-	1	0.2	1	.3	1	0.2	-	-	-	-
Limited English Proficient	126	79.3	104	79.4	107	78.7	255	63.4	250	69.4	277	66.1	174	64.7	236	69.8
Economically Disadvantaged	152	95.6	125	95.4	135	99.3	382	95.0	335	93.1	395	94.0	258	95.9	331	97.9
At-Risk	140	88.0	120	91.6	129	94.9	373	92.8	318	88.3	379	90.5	253	94.1	330	97.6
**Total Enrolled or Registered in HISD													518	100.0	694	100.0

Note: Enrollment data based on PEIMS.

*The 2018-2019 academic year was the first year that HIPPY staff registered children in the HISD student information system who were not current students.

Demographic data are depicted only for HIPPY children who were enrolled at an HISD campus.

**Total HIPPY children represent all children of parents who participated in the program. This data point was captured during the 2018-2019 and the 2019-2020 academic years only when children were captured in the HISD student information system.

There were 518 children either enrolled or registered in HISD's student information system during the 2018-2019 academic year; however, 773 children were documented in a database provided by HIPPY program administrators as participating in the program. During the 2019-2020 academic year, there were 694 children in the HIPPY database provided by program administrators, and 338 children that were either enrolled or registered in the HISD student information system.

Appendix D

HIPPY Activities and Field Trips, 2019-2020				
Date	Location	Number of Adults Invited	Number of Children Invited	Number of Attendees Present
10/18/19	Levy Park	51	57	294
10/23/19	Vinson Library	9	5	18
11/22/19	Vinson Library	11	11	46
12/5/19	Children's Museum Houston	83	93	389
12/12/19	Children's Museum Houston	53	58	376
12/12/19	Vinson Library	11	10	68
1/23/20	Smith Neighborhood Library	19	21	88
1/29/20	Baker Ripley Gulfton	21	22	84
1/30/20	Herrera Elementary School	51	52	217
1/30/20	Vinson Library	35	36	149
2/25/20	Ninfa Lorenzo ECC	15	16	60
2/26/20	Farias Elementary School	23	25	56
2/26/20	Halpin ECC	7	10	22
2/26/20	Herrera Elementary School	13	10	36
2/26/20	Baker Ripley	3	3	22
2/27/20	Vinson Library	13	12	70
Total		418	441	1995

Appendix E

CIRCLE Assessment Literacy Subtests Results, 2019-2020								
English	N	BOY	MOY		Spanish	N	BOY	MOY
Rapid Letter Naming	101	12.8	39.6		Rapid Letter Naming	172	10.5	44.1
Rapid Vocabulary	97	13.4	41.2		Rapid Vocabulary	173	10.4	44.5
Words in a Sentence	92	14.1	41.3		Words in a Sentence	162	10.5	45.7
Alliteration	98	13.3	40.8		Alliteration	172	10.5	44.8
Syllabification	100	13.0	40.0		Syllabification	172	10.5	44.8

CIRCLE Assessment Mathematics Subtests Results, 2019-2020								
English	N	BOY	MOY		Spanish	N	BOY	MOY
Patterns	79	10.1	45.6		Patterns	177	5.1	41.8
Shape Naming	81	9.9	44.4		Shape Naming	182	5.5	42.3
Shape Discrimination	81	9.9	44.4		Shape Discrimination	182	18.2	42.3
Number Naming	81	9.9	44.4		Number Naming	182	18.2	42.3
Number Discrimination	81	9.9	44.4		Number Discrimination	181	18.1	42.5
Rote Counting	81	10.9	44.4		Rote Counting	182	18.2	42.3
Counting Sets	81	9.9	44.4		Counting Sets	182	18.2	42.3

Appendix F

Literacy English Language CIRCLE Percent Met Benchmark from BOY to MOY, HIPPY vs. Non-HIPPY Performance, 2019-2020

	English Literacy	BOY			MOY			
HIPPY Status	Subject Subtest (CIRCLE)	Total (N)	Met Benchmark (N)	Met Benchmark (%)	Met Benchmark (N)	Met Benchmark (%)	Change	Difference-in Differences (DiD)
Non-HIPPY	Alliteration	10,239	554	5.4	2,407	23.5	18.1	
	Rapid Letter Naming	10,239	3,242	31.7	6,018	58.8	27.1	
	Rapid Vocabulary	10,239	3,317	32.4	5,029	49.1	16.7	
	Syllabication	10,239	913	8.9	3,822	37.3	28.4	
	Words In A Sentence	10,239	1,051	10.3	3,439	33.6	23.3	
HIPPY	Alliteration	130	3	2.3	25	19.2	16.9	-1.2
	Rapid Letter Naming	130	33	25.4	67	51.5	26.2	-1
	Rapid Vocabulary	130	27	20.8	46	35.4	14.6	-2.1
	Syllabication	130	8	6.2	44	33.8	27.7	-0.7
	Words In A Sentence	130	10	7.7	32	24.6	16.9	-6.4

Math English Language CIRCLE Percent Met Benchmark from BOY to MOY, HIPPY vs. Non-HIPPY Performance, 2019-2020

	English Math	BOY			MOY			
HIPPY Status	Subject Subtest (CIRCLE)	Total (N)	Met Benchmark (N)	Met Benchmark (%)	Met Benchmark (N)	Met Benchmark (%)	Change	Difference-in Differences (DiD)
Non-HIPPY	Counting Sets	18,300	2,672	14.6	5,622	30.7	16.1	
	Number Discrimination	18,300	4,477	24.5	6,617	36.2	11.7	
	Number Naming	18,300	2,806	15.3	5,226	28.6	13.2	
	Patterns	18,300	1,908	10.4	4,673	25.5	15.1	
	Rote Counting	18,300	1,389	7.6	4,195	22.9	15.3	
	Shape Discrimination	18,300	4,231	23.1	6,587	36	12.9	
	Shape Naming	18,300	3,443	18.8	5,927	32.4	13.6	
HIPPY	Counting Sets	182	25	13.7	57	31.3	17.6	1.5
	Number Discrimination	182	45	24.7	65	35.7	11	-0.7
	Number Naming	182	24	13.2	55	30.2	17	3.8
	Patterns	182	18	9.9	43	23.6	13.7	-1.4
	Rote Counting	182	11	6	44	24.2	18.1	2.8
	Shape Discrimination	182	49	26.9	64	35.2	8.2	-4.6
	Shape Naming	182	32	17.6	58	31.9	14.3	0.7

Appendix F (cont'd)

Literacy Spanish Language CIRCLE Percent Met Benchmark from BOY to MOY, HIPPY vs. Non-HIPPY Performance, 2019-2020								
	Spanish Literacy	BOY			MOY			
HIPPY Status	Subject Subtest (CIRCLE)	Total (N)	Met Benchmark (N)	Met Benchmark (%)	Met Benchmark (N)	Met Benchmark (%)	Change	Difference-in Differences (DiD)
Non-HIPPY	Alliteration	5,792	380	6.6	2,399	41.4	34.9	
	Rapid Letter Naming	5,792	824	14.2	3,908	67.5	53.2	
	Rapid Vocabulary	5,792	1,049	18.1	3,414	58.9	40.8	
	Syllabication	5,792	469	8.1	3,098	53.5	45.4	
	Words In A Sentence	5,792	318	5.5	2,264	39.1	33.6	
HIPPY	Alliteration	165	10	6.1	65	39.4	33.3	-1.5
	Rapid Letter Naming	165	29	17.6	120	72.7	55.2	1.9
	Rapid Vocabulary	165	37	22.4	110	66.7	44.2	3.4
	Syllabication	165	9	5.5	96	58.2	52.7	7.3
	Words In A Sentence	165	6	3.6	74	44.8	41.2	7.6

Math Spanish Language CIRCLE Percent Met Benchmark from BOY to MOY, HIPPY vs. Non-HIPPY Performance, 2019-2020								
	Spanish Math	BOY			MOY			
HIPPY Status	Subject Subtest (CIRCLE)	Total (N)	Met Benchmark (N)	Met Benchmark (%)	Met Benchmark (N)	Met Benchmark (%)	Change	Difference-in Differences (DiD)
Non-HIPPY	Counting Sets	5,975	1,032	17.3	3,979	66.6	49.3	
	Number Discrimination	5,975	2,390	40	4,602	77	37	
	Number Naming	5,975	952	15.9	3,496	58.5	42.6	
	Patterns	5,975	922	15.4	3,315	55.5	40.1	
	Rote Counting	5,975	328	5.5	2,447	41	35.5	
	Shape Discrimination	5,975	1,783	29.8	4,386	73.4	43.6	
	Shape Naming	5,975	814	13.6	3,507	58.7	45.1	
HIPPY	Counting Sets	169	34	20.1	122	72.2	52.1	2.7
	Number Discrimination	169	78	46.2	140	82.8	36.7	-0.3
	Number Naming	169	39	23.1	104	61.5	38.5	-4.1
	Patterns	169	15	8.9	101	59.8	50.9	10.8
	Rote Counting	169	16	9.5	76	45	35.5	0
	Shape Discrimination	169	47	27.8	127	75.1	47.3	3.8
	Shape Naming	169	30	17.8	108	63.9	46.2	1.1