THE HOME INSTRUCTION FOR PARENTS OF PRESCHOOL YOUNGSTERS (HIPPY)
PROGRAM’S EFFECT ON ACADEMIC ACHIEVEMENT OF TAKS TESTS

Olayinka Kofoworola Moore, B.S.F.C.S.

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APPROVED:

Arminta Jacobson, Major Professor
Gladys Hildreth, Committee Member
Angela Nievar, Committee Member
Abbas Taskakkori, Chair of the Department of Educational Psychology
Jerry R. Thomas, Dean of the College of Education
James D. Meernik, Acting Dean of the Toulouse Graduate School
Moore, Olayinka Kofoworola. The Home Instruction for Parents of Preschool Youngsters (HIPPY) program’s effect on academic achievement of TAKS tests. Master of Science (Development and Family Studies), August 2011, 51 pp., 89 tables, 2 figures, references, 47 titles.

This study investigated the effectiveness of the Home Instruction for Parents of Preschool Youngsters (HIPPY) program on school readiness. The HIPPY program uses home-based instruction to aid parents in teaching their children school readiness skills. The curriculum in this program includes literacy, math, and social skills. Texas Assessment of Knowledge and Skills assesses the academic achievement of students in different grade levels and in various subject areas. The chi square test revealed that the children in the HIPPY program were more likely to have higher passing rates on the first administration of TAKS Reading, Math and Science sections compared to non-participants. The implementation of early intervention and parental involvement programs such as HIPPY helps to facilitate students’ success.
ACKNOWLEDGMENTS

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In the United States, poverty has increased an average of 9% from 1959 to 2005 (U.S. Census Bureau, 2008; Power, Dowrick, Ginsbury-Block & Manz, 2004). According to the 2006 U.S. Census Bureau Report, people of Hispanic origin make up 21.8% of those living in poverty. The U.S. Census predicts that by 2050, Hispanics will constitute more than 30% of the population. They also report that Hispanics seem to profit least from American public education, and their reading performance lags behind the scores of other ethnicities and races (Stern and Williams, 1986). Children who live in poverty often face problems with academic achievement. Poverty is the foremost demographic predictor of which students will become our nation’s high school dropouts (Paulu, 1987). Because of their lower socioeconomic status (SES), many children are not fully equipped with the necessary early educational skills to succeed in school.

Unfortunately, some young children with low SES may not receive the in-home academic assistance that they need. As a result, these children begin to have difficulty in their schoolwork and may fall behind academically. Preschool-aged children under these circumstances may not receive basic academic skill development prior to starting school, as a result they begin school at an academic disadvantage. The academic and cognitive skills needed before going to school are commonly referred to as “school readiness.” In order for children to achieve school readiness, parents should become involved in their education by acting as the child’s first teacher. Some parents are unaware of the school readiness skills necessary for their children’s academic success. The purpose of this study is to determine if the Home Instruction Program for Parents of Preschool Youngsters (HIPPY) program— which focuses on parent involvement, literacy
development, and school readiness -- helps children achieve academic success at school entry and later on in their academic careers.

Previous research indicates that children are more likely to be academically successful if their parents are knowledgeable and encouraging of their children’s school experience (Epstein, 2001; Henderson & Mapp, 2002). One example of a parent involvement program associated with academic achievement is Early Head Start. Three-year-old children in Early Head Start programs demonstrate higher cognitive and language development than children who are not in the program (Love, 2002). Instrumental in the success of children in Early Head Start programs are the home visits and center-based services that give the children early exposure to important educational concepts. Early Head Start also promotes parent involvement, an important part of the Home Instruction for Parents of Preschool Youngsters (HIPPY) program as well (Roggman, Boyce, Cook & Cook, 2002). Early Head Start programs focus on the importance of early engagement with infants and how this relates to more positive parent/child interaction.

Prior to the 1960s, there was not as much need for intervention programs, but when the gap in the socioeconomic status began to widen, the need increased (Wright, 2000). “Growing up in a state with widespread economic inequality increases educational attainment for high-income children and lowers it for low-income children” (Mayer, 2001). In the 1960s, government policies initiated changes in the public education system across the United States (Futrell, 2004). As a result, school readiness intervention programs became more prevalent after the 60s (Justice & Ezell, 2002). One contemporary example of these types of programs is the No Child Left Behind mandate, which requires school districts to be responsible for grade-level achievement in reading and mathematics. Researchers were able to demonstrate that school failure affects schools, families, and communities in many ways (Guisbond & Neill, 2004). The premise of the
No Child Left Behind mandate is that children’s academic success will lead to financial self-sufficiency. The government deemed that intervention programs were necessary in order to assist children in achieving these goals.

Rationale

Many children in America face hardships due to their SES. The difference in SES has led to a gap in educational performance between upper- and lower-class children. Children who live in prosperous areas have exposure to more opportunities and are likely to have parents who are more involved with their education. Conversely, children who live in low SES areas have fewer opportunities for parent involvement and less access to resources that would improve their academic standing (Boulden, 2006). One of the most disadvantaged groups is children of non-English-speaking immigrants.

The particular focus of this study is on low-income children of immigrants from Hispanic/Latin American countries. These children may have difficulty in academic achievement based on cultural and language differences (Rodriguez & Higgins, 2005; Vaughn, Thompson, Mathes, Cirino, Carlson, Durodola, Hagan & Francis, 2006). Immigrant parents may assume that all books in the library are written in English and may not be aware of library resources such as books in Spanish. Because textbooks and communication with school staff and teachers are often in English, the language barrier may cause more difficulty for Hispanic parents when helping their children with homework assignments. As a result, parents can diminish their child’s chance of being exposed to early literacy before starting school, decreasing their child’s school readiness.

Purpose

The research question this thesis attempts to answer is whether participation in the
HIPPY program affects academic achievement. The researchers hope to answer the question if students enrolled in the HIPPY program are more likely to close the achievement gap and earn scores that are generally equal to their upper SES peers and statistically higher than their lower SES peers who did not participate in the HIPPY program.

The research study was a quasi-experimental design, since the sample came from an existing set of student data. This study attempted to examine the relation between early intervention programs and student academic achievement.

Assumptions

Based on prior research, the following statements are held to be true:

1. Students who earn high scores on standardized tests in primary grades will have higher academic achievement in secondary grades and high overall achievement in life. (Raver, Aber, Gershoff, 2007)

2. Students who perform well in reading in primary grades will have academic achievement in secondary grades and high overall achievement in life. (Raver, Aber, Gershoff, 2007)

3. Parental involvement is a positive determinant of academic success for children. (Raikes, Luze, Brooks-Gunn, Pan, Tamis- LeMonda, Constantine, Tarullo, Rodriguez, 2006)

Children of Latino or Hispanic immigrant parents are a particularly high risk group for school failure due to language variance between home and school as well as living with a low SES. This study investigated whether HIPPY can provide parents and students with school readiness strategies that lead to academic achievement.
Sociocultural Theory

In order to understand the importance of academic intervention programs, one must examine theories concerning child development. Lev Vygotsky’s study of children, their development, and how they solve problems inspired him to conceive sociocultural theory, which identifies a link between social environment and cognition (Vygotsky, 1962; Gallagher, 1999).

Sociocultural theory suggests that social interaction leads to continuous systematic changes in children's thoughts and behaviors that can vary greatly from culture to culture (Woolfolk, 1998; de Valenzuela, 2002). Vygotsky’s theory was developed while looking for successful methods of instructing children. He discovered that it is first necessary to understand the development of scientific concepts in the child’s mind. In order for the child to learn what he or she is being taught, there must be a relationship between assimilating information and the internal development of scientific concepts in the child’s consciousness (Vygotsky, 1962).

Childrens’ cognitive development is a result of their experiences from their environment. Experiences that children have in their home environment prior to school help shape the way they will learn. Therefore, children in an impoverished environment with little or no resources and reduced social support are less likely to have academic success in school because they lack a supportive environment that would provide them with opportunities for academic achievement. In addition, parents who are unaware of the means to develop their child’s cognitive ability may unknowingly create an academic disadvantage for their child. Intervention programs have been developed to allow children the opportunities for cognitive experiences that can help them succeed academically.

Sociocultural theory proposes that child development relies on interactions with people and the tools their culture provides to help form a child’s view of the world. The four basic
principles of the sociocultural theory are that children construct their own knowledge; development cannot be separated from its social context; learning leads to development; and language plays a central role in mental development (de Valenzuela, 2002).

Vygotsky’s sociocultural theory states that there are three ways to transfer cultural tools from one individual to another (Tomasello, et al., 2005): imitative learning, instructed learning, and collaborative learning. In the first example, imitative learning, one person tries to imitate or copy another person, which is very common in young children. The second way is through instructed learning; this involves remembering and using instructions to self-regulate. Collaborative learning is the final way and involves a group of peers who strive to understand each other and work together to learn a specific skill (Tomasello et al., 2005).

Sociocultural theory supports the HIPPY program’s emphasis on improving the academic achievement of children through parental instructions, since children’s first cognitive experiences occur in the home prior to school attendance. The program applies all of the basic principles of the sociocultural theory that a child’s cognitive development is based on the life experiences.

**HIPPY**

HIPPY is an international program that began in Israel as a research and demonstration project in 1969. The HIPPY program came to the United States in 1984 and the mission statement of the international HIPPY program is “Empower parents as primary educators of their children in the home and foster parent involvement in school and community life to maximize the chances of successful early school experiences.” The mission statement for HIPPY USA is “Support the development and operation of programs in communities across the United States
through ongoing program development and technical assistance informed by research and public policy” (HIPPY USA, 2007, n.p.g).

One of the aims of the HIPPY program is to give low-income children a chance to attain academic achievement like their counterparts in better financial circumstances. The parent involvement component is an essential part of the program. Parents are actively involved by using the HIPPY curriculum to teach their preschoolers school readiness and expose the students to concepts that they will learn more about in kindergarten.

HIPPY peer home visitors conduct home visits to train parents in using the home-based curriculum. The home visits are the core of the program; they help build the parent-community-school partnership. The parents are trained in the three-year curriculum and teach the lessons to their children ages 3, 4, and 5 years.

The program curriculum consists of 30 weekly lessons, shapes, books, scissors, and crayons. Some of the skills that the preschool-aged children attain include early literacy, listening, singing, rhyming, playing games, cooking, sewing, identifying shapes and colors, and solving puzzles.

HIPPY also includes language development activities such as early literacy, letter recognition, early writing experiences, phonological and phonemic awareness, pre-reading skills, and social skills such as listening, problem solving, taking turns, and working together, which are all very important to school readiness. Various researchers have collected data on children in the HIPPY program throughout their primary and secondary education (HIPPY USA, 2007).

In the 2004-2005 end of the year report, HIPPY reported having 150 sites in 24 states, including the District of Columbia. The following chart shows demographic information for HIPPY USA (HIPPY USA, 2007, n.p.g.).
Table 1

Demographics of HIPPY USA

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of children in the program</td>
<td>16,086</td>
</tr>
<tr>
<td>Children in program – age 3</td>
<td>40%</td>
</tr>
<tr>
<td>Children in program – age 4</td>
<td>43%</td>
</tr>
<tr>
<td>Children in program – age 5</td>
<td>17%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>32%</td>
</tr>
<tr>
<td>African American/Black</td>
<td>32%</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>29%</td>
</tr>
<tr>
<td>Asian, Native American, Pacific Islander, other</td>
<td>7%</td>
</tr>
<tr>
<td>Children that speak English</td>
<td>70%</td>
</tr>
<tr>
<td>Children that speak Spanish</td>
<td>28%</td>
</tr>
<tr>
<td>Children that speak other languages</td>
<td>2%</td>
</tr>
</tbody>
</table>

Since the implementation of the HIPPY program, researchers have evaluated its effectiveness. A longitudinal research study, conducted and funded by the U.S. Department of Education, found the following statistics which support the assertion that participation in HIPPY improves students’ school performance and competence significantly.

The impact the HIPPY program has on school performance in third and sixth grade was previously analyzed in addition to three other areas: school attendance, actions taken by school district, and teacher ratings of classroom behavior (Bradley & Gilkey, 2002). The purpose of this study was to determine the impact of HIPPY on school performance of third- and sixth-grade students. The quasi-experimental study consisted of three groups: children in the HIPPY program, children who participated in a different preschool program and children who did not have a prior preschool experience.
The Arkansas-based research study consisted of 1,032 children: 516 HIPPY children and another 516 children who either attended a preschool program or did not have previous preschool experience. The HIPPY students were from 21 HIPPY programs in 81 school districts. The measures of the experiment looked at classroom grades in math, reading, and language arts and standardized achievement tests. The Stanford-8 achievement test battery was used at the time of the research study. Information was collected from academic records and from an adapted version of the Child Classroom Adaptation Inventory. Results from a converted four-point scale (A = 4; F = 0) indicated that the HIPPY students performed better than the other two groups in the classroom grades on reading and language arts, and the HIPPY children performed better in math than children with no preschool experience. In addition, the multivariate analysis of variance was used to compare the students’ math, language arts and reading scores on the Stanford-8 test battery. HIPPY students performed better in reading and language arts than both of the other two groups; but in math the HIPPY students only performed better than the students without prior preschool experience. The results did not indicate any statistically significant difference between the HIPPY students and students with no preschool experience in math. The research findings were similar in third and sixth grade.

Current HIPPY Research

Even though data has been collected on children in the HIPPY program throughout their primary and secondary education and evaluated for general benefits, there is a limited amount of information about achievement on specific assessments. As a result, the research goal of this study is to determine whether the home-based curriculum instruction and parent involvement of the HIPPY program helps students achieve academic success in early elementary grades.

Overall research has concluded that participation in the HIPPY program had positive effects including reduced levels of suspension, higher grades, higher achievement test scores,
better classroom behavior, and reduction in the use of Title 1 services. (Garcia, 2006; Ronacher 2007).

Until now, only two research studies have been conducted on the HIPPY program in the Irving Independent School District. Both studies set out to analyze student performance on the TAKS test, and both studies have verified a positive correlation between student participation in the HIPPY program and academic achievement on the TAKS test.

The first research study, conducted in 2006, looked at the impact of the HIPPY program on reading, mathematics and language achievement of Hispanic English language learners (Garcia). The purpose of the study was to determine if the HIPPY program had a positive academic impact on Hispanic third graders. This quantitative study with a quasi-experimental design consisted of 35 HIPPY students in the treatment group and 35 non-HIPPY students from 15 elementary schools in the district. All students had continuous enrollment in the school district from pre-kindergarten until third grade. The results indicated that the Hispanic children in the HIPPY program were better prepared to succeed on the English version of the TAKS Reading assessment in comparison to their counterparts who did not participate in the HIPPY program.

The second research study concluded that across all grade levels, HIPPY students outperformed non-HIPPY students in TAKS Reading, and HIPPY students were more likely to advance to the next grade level. According to 1st grade teachers, HIPPY students are better prepared for school, enjoy the educational process better, exhibit an interest and appreciation for books, and are 10 times more likely to use more advanced vocabulary (Ronacher, 2007).

The major strength of this study was the availability of previous research conducted on this particular topic. The southwest school district used in this study has conducted two similar studies on the correlation between the HIPPY program and academic achievement (Garcia 2006; Ronacher, 2007). Garcia investigated the positive academic impact the HIPPY program had on Hispanic English Language Learners (ELL). The results of this study concluded that the HIPPY program improved student achievement and had a positive impact on a child’s school readiness.
(Garcia, 2006). This information reinforces the importance of programs that provide parents with information on how to help their children succeed in school. The previous study and this current study looked at school readiness and academic achievement and both concluded that there is a relationship between the two and that intervention programs can lead to constructive results in young children’s academic achievement.

The second study, conducted in 2007, was a catalyst to this current research. In addition to looking at the academic performance of HIPPY students on the TAKS test, the study included a questionnaire for teachers about school readiness in the area of literacy. First grade teachers reported that the students in the HIPPY program were more likely to be interested in reading and showed a greater appreciation for literacy compared to non-program participants. The teachers also stated that the HIPPY students were more prepared academically and as a result, were more likely to advance to the next grade level. The final objective confirmed that HIPPY students were less likely to have behavior problems in the classroom. This current research study took a further look at the results presented in the 2007 study by looking specifically at the relation between school readiness provided by the HIPPY program and how it aided students in passing the TAKS test. Since the HIPPY program is a literacy-based intervention program, the early literacy developmental skills the students in the HIPPY program received may have helped in passing the TAKS Reading during the first administration of the exam. The HIPPY curriculum does include lessons that are based on mathematical concepts and skill development and, as a result, the curriculum activities may have helped HIPPY students pass the TAKS Math since the TAKS Math section contained word problems. Being able to have access to this school district’s database and tracking system of HIPPY students was an additional strength of this study.

To summarize the analysis of these two research studies, early intervention programs like HIPPY can lead to academic success and reduce the need for later intervention and retention programs. This research study is an attempt to further explore these findings and provide more research that supports the need for intervention programs.
Hypotheses

The following hypotheses were tested in this research study:

1. Across Grades 3, 4, 5, 6, 7, and 8, HIPPY children will have a statistically significant higher number of children who met standards on the Reading section of the TAKS test than matched cohort not in HIPPY program.

2. Across Grades 3, 4, 5, 6, 7, and 8, HIPPY children will have statistically significant higher number of children who met standards on the math section of the TAKS test than matched cohorts not in the HIPPY program.

3. Across Grades 4 and 7, HIPPY children will have statistically significant higher number of children who met standards on the writing section of the TAKS test than matched cohorts not in the HIPPY program.

4. In Grade 5, HIPPY children will have statistically significant higher number of children who met standards on Science section of the TAKS test than matched cohorts not in the HIPPY program.

Methods

This study examines a HIPPY program which was implemented in 1999 and is housed in a metropolitan school district in the southwest. The program started with 20 children and families and currently serves 461 children and families in the city. Since the start of the program, the district has recorded academic data on the children in the program.

Quantitative data, including whether or not the students met standard on the TAKS, were collected from the school district’s database. Chi square tests were used to compare HIPPY children’s scores to those of the comparison group, comprised of other Hispanic children from
the same school district with similar socioeconomic circumstances who were not in the HIPPY program. In this particular research study the independent variable has two groups which are HIPPY (0) and HIPPY ANY (1).

The measures that were examined are the Texas Assessment of Knowledge and Skills Reading/English Language Arts, Math, Writing and Science test scores. Next, the data was analyzed using the measures established for the research study. The dependent variable was whether or not all students who participated in the study met standard on first administration of the TAKS test in various subject areas; with 0 indicating students who did not meet standard on first administration and 1 indicating students who met standard on first administration of the TAKS test.

The main research question was whether intervention programs focusing on school readiness help children from economically disadvantaged circumstances achieve academic success. This research study investigated whether the children in the HIPPY program had higher (positive) academic achievement in comparison to children who were not in the HIPPY program. Using these categories, chi square test was used to determine if there was a difference in the two groups, and if there is a difference, the HIPPY group (1) is more likely to have higher rates of passing on the first administration of the TAKS test in the areas of Math, Reading, Science, and Writing.

Participants

The participants of the study were 322 students in the HIPPY program and 3,577 non-HIPPY students. The number of participants changed per subject of the TAKS tests. The data set includes TAKS scores for Reading/English Language Arts, Math, Writing and Science. The students in the HIPPY program were the treatment group, and their cohorts-- the students that did
not participate in the HIPPY program-- were the control group. Participants were matched on the four criteria of race, grade level/campus, socioeconomic status, and language. Since the majority of the students in the HIPPY program were Hispanic, the control group also consisted of Hispanic students. The grade levels were matched according to the TAKS testing schedule for each grade. The SES minimum qualification was determined by the school lunch survey (see Appendix 3.4). Only students qualifying for free lunch or reduced lunch in pre-kindergarten were included in the study. The final criterion students were matched on is language, determined by their limited English proficiency (LEP) status. LEP is determined by verifying that Spanish was the primary and dominant language spoken in the home. This information was reported on the Home language survey (see Appendix 3.5).

All participants meeting all criteria were used. Because there was no predetermined randomized control group, the research was considered quasi-experimental. The measures for this research were independent variable chi square tests.

Instruments

The students’ third grade test scores were retrieved from several databases in the school district. The tests included Texas Assessment of Academic Skills in the areas of math, reading, science and writing.

TAKS. The Texas Assessment of Knowledge and Skills test is a statewide standardized exam that measures the state curriculum, Texas Essential of Knowledge of Skills (TEKS). In order to accomplish academic achievement and examination success, the TEKS curriculum is closely aligned with the TAKS test. The TAKS test covers five subject areas: Reading/English Language Arts (R/ELA), Mathematics, Writing, Science, and Social Studies. For the purposes of this quasi-research experiment, only TAKS Reading, Math, Writing, and Science will be
analyzed. The TAKS test has a minimum passing score that changes every year (based on the No Child Left Behind mandate).

The Reading/English Language Arts (R/ELA) component of the TAKS includes the reading and writing tests. The four main objectives of the TAKS reading test are (1) the student will demonstrate a basic understanding of culturally diverse written texts; (2) the students will apply knowledge of literacy elements to understand culturally diverse written texts; (3) the students will use a variety of strategies to analyze culturally diverse written texts; (4) the students will apply critical thinking to analyze culturally diverse written texts. The overall goal is for students to gain reading fluency and lifelong reading strategies, not just to pass an examination. The Reading/English Language Arts section is important because reading is viewed as one of the most vital foundations of learning (TEA, 2007). The 4th and 7th grade TAKS writing tests are included under the R/ELA section. The main objectives of TAKS writing include: (a) the student writes for a variety of audiences and purposes, and in a variety of forms; (b) penmanship, capitalization, punctuation, spelling, and grammar/usage; and (c) connect writing to real life experiences.

The Math components of TAKS are broken down by grade level. All grades include the following components: (a) the student will build a basic understanding in number, operation, and quantitative reasoning; patterns, relationships, and algebraic thinking; geometry and spatial reasoning; measurements; and probability and statistics; (b) student will use algorithms for addition, subtraction, multiplication, and division as generalizations connected to concrete experiences; (c) student will concretely develop basic concepts of fractions and decimals; and (d) student will use appropriate language and organizational structures such as tables and charts to represent and communicate relationships, make predictions, and solve problems.
The Science components of TAKS include two major sections, scientific processes and scientific concepts. Within scientific processes students will be able to follow safety rules in the classroom, field and laboratory; student will understand scientific method and use critical thinking in science experiments. Scientific concepts for grades K – 8 include life, physical, and earth/space sciences.

Table 2

<table>
<thead>
<tr>
<th>Grade level</th>
<th>READING</th>
<th>WRITING</th>
<th>MATH</th>
<th>SCIENCE</th>
<th>SOCIAL STUDIES</th>
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<td>8</td>
<td></td>
<td>X</td>
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Procedure

Upon receiving approval from the University of North Texas Institutional Review Board and the school district evaluation and research director, the research process began. The lead researcher met with one of the district researchers to organize the data. Since this research study was based on archival data, there was not a need to meet with the students. All of the data gathered was for the 2007-2008 school year.

In order to be able to compare the test scores, the two groups had to be identified and separated. We worked with two different databases: the HIPPY tracking database and the TAKS tests database. The HIPPY tracking database, which contains longitudinal data, is stored in Paradox, a system used to manage data files. The HIPPY tracking database holds records for all 1,194 HIPPY students in the district. Since some children begin the program prior to entering pre-kindergarten, they do not have district-assigned student identification (ID) numbers. In order
for these students to be entered into the database, they were assigned temporary six-digit numbers of either 777777 or 999999. Fifty-nine student records with the fabricated ID numbers were eliminated from the study because it was not be possible to match them with their TAKS test scores.

The next step was to create the treatment and comparison groups. The treatment group was comprised of students who participated in the HIPPY program for at least one year. The comparison group was non-HIPPY students whose files were in the TAKS database. The Texas Education Agency (TEA) provides each school district a database containing TAKS scores for all students in the school district, which includes demographic information. The TAKS test has different administrations based on the time of year the student takes the exam and the academic ability or disability of each individual student. There is a Spanish version of the TAKS test, but for the purposes of this study all exams were administered in English. Each version of the test is given a code.

Table 3

*TAKS Test Codes*

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS</td>
<td>Scale score</td>
<td>A</td>
<td>Accommodated version of TAKS</td>
</tr>
<tr>
<td>SCD</td>
<td>Score code</td>
<td>LEP</td>
<td>Limited English Proficiency</td>
</tr>
<tr>
<td>MTS</td>
<td>Met standard</td>
<td>BIL</td>
<td>Bilingual education</td>
</tr>
<tr>
<td>CMD</td>
<td>Commended</td>
<td>ESL</td>
<td>English as a Second Language</td>
</tr>
<tr>
<td>TV</td>
<td>Test version</td>
<td>ECONDIS</td>
<td>Economic disadvantaged</td>
</tr>
<tr>
<td>RS</td>
<td>Raw score</td>
<td>SPED</td>
<td>Special Education</td>
</tr>
<tr>
<td>GIF</td>
<td>Gifted/talented</td>
<td>SS</td>
<td>Social studies</td>
</tr>
<tr>
<td>MA</td>
<td>Math</td>
<td>K</td>
<td>Regular version of TAKS</td>
</tr>
<tr>
<td>WR</td>
<td>Writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELA</td>
<td>Reading Lang. Arts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TAKS accommodated (A) and TAKS regular (K) were analyzed, and to eliminate the possibility of testing irregularities, only students with a normal score code of (S) were counted in the study. The next step was to combine the TAKS database with the HIPPY tracking database. Both were placed into Statistical Package for the Social Sciences (SPSS) for data analysis. We looked at the students that had a met standard score on the first administration of the exam in each of the subject areas. Met standard score means that the student took the exam and either passed or failed on the first time attempt. On each test, a scaled score of 2100 is required to pass. Raw scores are converted to get scaled scores. Scaled scores are then used to determine the met standard score.

The independent variables consisted of two comparison groups, HIPPY, which is represented by (0) and non-HIPPY or HIPPY ANY, which is represented by (1). Chi square tests were used to determine the differences between the two groups on the met standard tests. (0) indicated students who did not meet standard on the first administration and (1) indicated students who met standard on first administration of TAKS test.

Data Analysis

Hypothesis 1

A chi square test was performed to determine if children in the treatment group (HIPPY) had statistically significant different number of children who met standard scores on the first administration of the TAKS Reading test across grade levels in comparison to the scores of the children in the control group (non-HIPPY).

Hypothesis 2

A chi square test was performed to determine if children in the treatment group (HIPPY) had statistically significant different number of children who met standard scores on the first
administration of the TAKS Math test across grade levels in comparison to the scores of the children in the control group (non-HIPPY).

Hypothesis 3

A chi square test was performed to determine if children in the treatment group (HIPPY) had statistically significant different number of children who met standard scores on the first administration of the TAKS Writing test across grade levels in comparison to the scores of the children in the control group (non-HIPPY).

Hypothesis 4

A chi square test was performed to determine if children in the treatment group (HIPPY) had statistically significant different number of children who met standard scores on the first administration of the TAKS Science across grade levels in comparison to the scores of the children in the control group (non-HIPPY).

This information attempted to answer the question of whether there is a link between the intervention practices of the HIPPY program and the academic success of the students in the HIPPY program. Assessing passing rates of the first administration of the TAKS test in different subject areas and across different grade levels may show continued academic progress of at-risk students in the HIPPY program. Since the entire test scores were based on previously established standards, reliability and validity were already determined.

Results

The purpose of this research study was to determine if HIPPY students have a higher met standard score on first administration of the TAKS test in comparison to non-HIPPY students. This section presents results that will answer research questions of this study to ascertain whether the differences between groups were statistically significant at .05 level.
Hypothesis 1 states that across grades 3-8, HIPPY students will have statistically significant difference higher met standard scores on first administration of TAKS Reading compared to non-HIPPY students. This was based on students passing the TAKS Reading section on the first administration of the exam.

As shown in Table 5 the results of the chi square test academic achievement (HIPPY vs. HIPPY ANY) and TAKS Reading scores, with HIPPY = 820 and non-HIPPY ANY = 2.730. The results of the findings show that there was a statistically significant difference between the HIPPY students (Met Standard = 51) and the HIPPY ANY students (Met Standard = 271) in relation to having a higher met standard rate of TAKS reading test at the .05 significance level. The effect size (σ) of .048 is considered a small effect size.

An independent samples chi square test was conducted to explore differences between HIPPY and Non-HIPPY students’ abilities to meet academic standards on the TAKS Reading test. Results suggest there is a statistically significant difference using an alpha of .05 (χ² =8.93, p = .002805). HIPPY students were found to have met the standard with greater frequency. However, the magnitude of this effect was considered small (σ =.048).
Table 5

*Crosstabulation of TAKS Reading.*

<table>
<thead>
<tr>
<th></th>
<th>HIPPY</th>
<th>non HIPPY</th>
<th>df</th>
<th>$\chi^2$</th>
<th>$\phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Tested</td>
<td>820</td>
<td>2730</td>
<td>1</td>
<td>8.93*</td>
<td>.05</td>
</tr>
<tr>
<td>Met Standard</td>
<td>51</td>
<td>271</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Grades 3-8, HIPPY students will have statistically significantly higher met standard scores on first administration of TAKS Math compared to non-HIPPY students. This was based on students passing the TAKS Math section on the first administration of the exam.

Table 6 presents the results of the chi square test for academic achievement (HIPPY vs. HIPPY ANY) and TAKS Math scores, with HIPPY = 992 and N HIPPY ANY = 2585. The results of the findings show that there was a statistically significant difference between the HIPPY students (Met Standard = 62) and the HIPPY ANY group (Met Standard = 259) in relation to having a higher passing rate of TAKS Math test at the .001 significance level. The effect size ($\sigma$) of .0521 is considered a small effect size.

An independent samples chi square test was conducted to explore for differences between HIPPY and Non-HIPPY students’ ability to meet academic standards on the TAKS math test. Results suggest there is a statistically significant difference using an alpha of .05 ($X^2 = 8.93$, $p = .003$). HIPPY students were found to have met the standard with greater frequency. However, the magnitude of this effect was considered small ($\sigma = .0521$).
Table 6  
*Crosstabulation of TAKS Math*

<table>
<thead>
<tr>
<th></th>
<th>HIPPY</th>
<th>non HIPPY</th>
<th>df</th>
<th>$\chi^2$</th>
<th>$\phi$</th>
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</thead>
<tbody>
<tr>
<td>Students Tested</td>
<td>992</td>
<td>2585</td>
<td>1</td>
<td>8.93*</td>
<td>.05</td>
</tr>
<tr>
<td>Met Standard</td>
<td>62</td>
<td>259</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 3 stated that in grades 4 and 7, HIPPY students will have significantly higher met standard scores on first administration of TAKS Writing compared to non-HIPPY students. This was based on students passing the TAKS Writing section on the first administration of the exam.

Table 7 presents the results of the chi square for academic achievement (HIPPY vs. HIPPY ANY) and TAKS Writing scores, with HIPPY = 204 and N HIPPY ANY = 1614. The results of the findings show that there was not a statistically significant difference between the HIPPY students (M = 6) and the HIPPY ANY group (M = 85) in relation to having a higher passing rate of TAKS writing test at the .05 significance level. The effect size ($\sigma$) of .0315 is considered a small effect size.

An independent samples chi square test was conducted to explore for differences between HIPPY and Non-HIPPY students’ ability to meet academic standards on the TAKS writing test. Results suggest there was not a statistically significant difference using an alpha of .05 ($\chi^2$ =1.89, $p = .03$). HIPPY students were found to have met the standard at about the same rate of frequency as non-participants. However, the magnitude of this effect was considered small ($\sigma$ = .0315).
Table 7

*Crosstabulation of TAKS Writing*

<table>
<thead>
<tr>
<th></th>
<th>HIPPY</th>
<th>non HIPPY</th>
<th>df</th>
<th>$\chi^2$</th>
<th>$\varphi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Tested</td>
<td>820</td>
<td>2730</td>
<td>1</td>
<td>8.93*</td>
<td>.05</td>
</tr>
<tr>
<td>Met Standard</td>
<td>51</td>
<td>271</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 4 states that across grades 3-8, HIPPY students will have statistically significantly higher met standard scores on first administration of TAKS Science compared to non-HIPPY students. This was based on students passing the TAKS Science section on the first administration of the exam.

Table 8 presents the results of the independent chi square test for academic achievement (HIPPY vs. HIPPY ANY) and TAKS Science scores, with HIPPY = 210 and HIPPY ANY = 344. The results of the findings show that there was not a statistically significant difference between the HIPPY students (M = 15) and the HIPPY ANY students (M = 48) in relation to having a higher passing rate of TAKS science test at the .05 significance level. The effect size ($\sigma$) of .0889 is considered a small effect size.

An independent samples chi square test was conducted to explore for differences between HIPPY and Non-HIPPY students’ ability to meet academic standards on the TAKS Science test. Results suggest there is a statistically significant difference using an alpha of .05 ($X^2 = 4.85$, p = .02). HIPPY students were found to have met the standard with greater frequency. However, the magnitude of this effect was considered small ($\sigma = .0889$).
Table 8

Cross tabulation of TAKS Science

<table>
<thead>
<tr>
<th></th>
<th>HIPPY</th>
<th>non HIPPY</th>
<th>df</th>
<th>$\chi^2$</th>
<th>$\varphi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Tested</td>
<td>820</td>
<td>2730</td>
<td>1</td>
<td>8.93*</td>
<td>.05</td>
</tr>
<tr>
<td>Met Standard</td>
<td>51</td>
<td>271</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion

In this study in the areas of TAKS Reading, TAKS Math, and TAKS Science tests, results indicated that participants in the HIPPY program were more likely to meet the standard on the first administration of the TAKS test. Results of the analyzed data reinforced the outcomes of previous research on intervention and intervention programs (Garcia, 2006, Ronacher, 2007). Even though only two of the four hypotheses had statistically significant differences, there is still a positive result of test scores for students who were in the HIPPY program in comparison to the scores of the control group. Overall, students that participated in the HIPPY program had outcomes that led to academic achievement (Garcia, 2006). The academic achievement of the children is a positive result of the home instruction that they received from their parents. It can be concluded that participating in a program like HIPPY has a positive result on academic achievement and it may help in closing the achievement gap.

Strengths

The findings on math, reading, and especially science are new and important. This information indicates that parental involvement, a strong example of the sociocultural theory, is effective in helping with academic achievement. This information is important because nationwide academic achievement is a problem for children growing up in low SES and
especially children that are English Language Learners. Research such as this study helps to identify intervention programs that can help in closing the achievement gap. Practitioners, school districts, and other non-profit organizations will find this information useful in applying for any new federal funding. Results of this study will also provide vital information for lawmakers and state legislators. As economic hardships continue and the American government looks for ways to decrease budgets and budget deficits, positive research results like this study can help to keep funding programs that can be proven to be effective and can be seen as an investment.

Implications

Based on the results of this study, the following recommendations are offered for future studies or replication. Future research should be conducted on HIPPY students and TAKS Science test scores across grades 5 and 8. In the 2009-2010 school year, the first group of HIPPY students was in the 8th grade; it will now be possible to look at TAKS Science scores of students in grades 5 and 8. Additional research studies that analyze HIPPY as a school readiness intervention program and look at the participants’ academic performance on standardized test such as TAKS and the Iowa Test of Basic Skills (ITBS) need to be created. In addition to the ITBS test comparison, more research should be conducted comparing the TAKS test to other standardized exams at various grade levels.

To accurately assess annual academic progress of HIPPY students, preschool academic assessments should be created and longitudinal data should be collected. The TAKS test is an effective measure of academic achievement, but is unable to collect data until several years after treatment has ended. It would be interesting to see more immediate results of the intervention program, specifically which areas of academics are affected, and also to further analyze the results of this particular study, and identify which aspects of the HIPPY program correlate with
passing scores in the areas of reading and math on the TAKS test. The assessments consisted of pre- and post-tests that are administered each year the child participates in the HIPPY program. The assessment tools are able to measure oral and receptive language development, object identification, listening comprehension, as well as letter, shape, and color identification. This assessment tool should be used in the HIPPY program at the state and national level.

Finally, a comparison study should be conducted between the HIPPY program and other early childhood intervention programs. Programs such as Head Start, Parents as Teachers, and AVANCE should be included in future studies with HIPPY to determine program similarities that can lead to school readiness. There are several research articles that show the effectiveness of the Head Start program and research studies are now being conducted on the effectiveness of the HIPPY program. Since both programs were created to increase parent involvement and school readiness, comparison studies between the two may be able to show exactly what components of intervention lead to academic achievement.

The information gathered from the study may aid in the push for more funding and research of intervention programs. With the new administration funding more Title I programs, the results of this study may help create more HIPPY centers across the country, especially in areas that have a great need for school readiness and parental involvement initiatives that lead to academic achievement. By providing children with early opportunities to develop academic skills for success, we will move closer to closing the educational gap.

References


APPENDIX A

EXTENDED REVIEW OF LITERATURE
Sociocultural Theory

In order to validate the correlation of interventions such as HIPPY with the academic achievement, it is important to look at theories that support these assumptions. The sociocultural theory states that a child’s cognitive development is a result of their environment. Experiences that children have in their home environment prior to school helps shape the way they will learn. In this section, the history of sociocultural theory will be reviewed. In addition literacy program, early intervention programs and school readiness programs will also be discussed and will conclude with an overview of the importance of HIPPY as an early intervention program that can help with academic achievement.

Parental involvement can help to achieve school readiness and the sociocultural theory coincides with this concept. The sociocultural theory was developed by Lev Vygotsky. Lev Vygotsky was born in Russia in 1896 and had a career dedicated to the study and application of psychology. In 1925, he conducted his first research study in psychology. He did not have any formal training in psychology, but his pure interest was his driving force.

Zone of Proximal Development

Another significant part of the sociocultural theory is the zone of proximal development. The zone of proximal development is defined as the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Ryder & Martin, 2007). The zone of proximal development represents the amount of learning possible by a student given the developmentally appropriate instructional conditions. In order to improve children’s chances for success, they must receive as much proper and high-quality instruction as early as possible.
Scaffolding is used as a teaching strategy that originated from Vygotsky’s sociocultural theory (Ryder & Martin, 2007). The scaffolding strategy provides individualized support based on the learner’s zone of proximal development. Scaffolding facilitates a child’s ability to build on prior knowledge and internalize new information. The activities provided in scaffolding instruction are slightly beyond the level of what the learner can do alone. Thus, it is necessary to assist children to accomplish the tasks that they could otherwise not complete alone (Ryder & Martin, 2007). Scaffolding helps provide the base for intervention programs such as HIPPY.

Intervention Programs

The achievement gap between diverse groups has many underlying factors. One of the most prominent factors, as previously mentioned, is SES. Research conducted in North Carolina inquired about the influence of parental involvement, SES of parents, and instructional supplies expenditures on mathematics achievement scores of 4th grade students in a low income county. The findings supported the notion that economic circumstances are correlated with academic achievement (Okpala, Okpala, & Smith, 2001). Children who are reared in low-income households tend to have less time with their parents and less access to resources (Rosenshine, 2002). The application of intervention programs in education has improved academic achievement (Rahm, Paule, Reny, & Moore 2005). Most intervention programs were put in place to help children who, compared to their cohorts, are financially disadvantaged and considered at risk of not attaining academic achievement.

The Texas state government has also participated in the effort to help students obtain academic achievement through school readiness (Landry, 2005). The state of Texas has played an active part in early childhood education and has also encouraged research in this area. State Senator Judith Zaffrini of Laredo established Texas Senate Bill 76 in order to improve school
readiness. The primary emphasis of Senate Bill 76 is to provide a higher-quality education for all children. The bill is also concerned with providing education that is cost effective. In 2003 the Texas Early Education Model (TEEM) was created to carry out the charge from the Texas State legislature State Bill 76 in 2003. The purpose of the TEEM is to improve school readiness of children entering kindergarten. The TEEM recipients, or lead agencies, consisted of Independent School Districts, Head Start programs, and various childcare centers in 11 Texas cities. The project studied 20 classrooms per city. During the first year of the program, they had 10 classrooms participating in the training / mentoring and implementation of school readiness programming, while the other half served as a control group and continued current practices. In the 2nd year of the program, they had 20 classrooms participating in training / mentoring and implementation of school readiness programming.

The goals of TEEM were for lead agencies to provide early care and education services to high-risk children with the help of community partners; promote strong classroom programs to develop school readiness skills in high risk pre-school children through intensive staff development activities; use research-based instructional materials with 3 and 4 year old children to provide 3 hours of cognitively based instruction/ hands-on learning to develop language and literacy skills; and monitor children’s progress. The evaluation criteria collected was based on five assessments: Preschool Language Scale-IV, Expressive Vocabulary Test, Developing Skills Checklist-Auditory, Woodcock-Johnson (Letter-Word Identification), and Woodcock-Johnson (Sound Awareness).

The outcomes of the project were presented on September 1, 2004 in a report to the state legislature. The results indicated “that children receiving the intervention made greater gains than children in classrooms with ‘business as usual’ in language development, vocabulary,
phonological awareness, letter knowledge, and letter sounds” (Landry, 2004). The results of the report give more support to the need for intervention programs that are literacy-based to help with academic achievement.

Parent Involvement

Children aged 3 to 5 years old living in poverty are much less likely to be prepared for school than children living above the poverty threshold (Landry, 2005). Founders of some intervention programs understand that reducing poverty is a part of increasing a child’s academic achievement. New Hope was an intervention program created to increase parent employment and reduce poverty (Huston, Duncan, McLoyd, Weisner, Eldred, Crosby & Ripke, 2005). The 5 year research study illustrated that in the New Hope project, which had a positive effect on parents and helped their financial circumstances, the parents are more likely to be involved with their children and help them with school. This active parent involvement will allow children a better chance at academic achievement.

Parent involvement is connected to school readiness, mainly because it has become an integral part of school involvement (Englud, Luckner, Whaley & Egeland, 2004). Involved parents actively take part in their child’s education by attending school functions, and participating in organized school groups such as Parent Teacher Association (PTA). Several advantages have been found with families, schools, and community partnerships. One way parents can be involved with their children’s education is by reading to their child. Child development specialists indicated that home reading was one way parents can support their child’s learning and school readiness (Huebner, 2000).

Dr. Zaman, an associate professor at Borough of Manhattan Community College researched parental roles in primary skill acquisition among Hispanic children ages three and
four. Information in Dr. Zaman research study found research that stated Hispanic children are the poorest and the fastest growing group who often did not receive formal educational exposure due to varied socio-economic and ethno-contextual factors. The study consisted of 48 Hispanic parents of three and four-year old children completing a Preliminary Learning Skills (PLS) questionnaire. The form contained pre-reading, pre-writing, pre-mathematical, and social-emotional domains that were adapted from the Primary Level Assessment System. The results of this particular study pointed out that Hispanic parents do not send their children to preschool nor participate in activities that help children be exposed to academic and social stimuli. Dr. Zaman concluded that some form of educational as well as enrichment programs for children at home would help in developing their preliminary learning skills.

Literacy Intervention Programs

Literacy intervention programs are also important in helping children with academic achievement. Early literacy intervention programs suggest including activities to enhance children’s readiness skills, coordinating access to early childhood programs, and educating parents on available community resources (Wright et al, 2000).

Intervention programs were created to reduce the problems caused by lack of school readiness. In order to understand this rationale, it is important to know that one third of first graders were lacking the basic skills and motivation that are necessary for success in school (Boyer, 1991). A research article investigated the role of early literacy and behavioral skills in predicting the improvement of children who have experienced reading difficulties in 1st grade (Spira, Bracken, & Fischel, 2005). Researchers monitored the progress of 146 low income 1st graders who had reading levels below the 30th percentile. The two main research questions were (1) how do the poorest readers in 1st grade rank in reading achievement through the fourth grade
and (2) which emergent literacy and behavioral skills measured in kindergarten predicted
differential 4th grade outcomes.

For the literacy part of the research project, students were given an initial literacy and
language skills assessment in the spring of their kindergarten year. Throughout kindergarten they
received additional assessments on school readiness. Once the students began formal reading,
standardized test assessed their reading achievement. Some of the instruments used include the
Peabody Picture Vocabulary Test (PPVT), Stanford Achievement Test (SAT), and Woodcock
Reading Mastery Test-Revised (WRMT).

This longitudinal study occurred from kindergarten to second grade and the results
concluded that of the 146 students in the study, by the end of 4th grade, 44 children scored above
the 13th percentile in reading. Researchers stated that the correlations between kindergarten skills
and growth indicated that those children who had a relative strength in phonological awareness,
oral language, print knowledge, letter-word identification, and classroom behavior in
kindergarten were more likely to show improvement after encountering initial reading
difficulties in 1st grade. Higher school readiness skills on entry into kindergarten was an indicator
of how successful the child would be at reading in 1st grade because the early literacy skills
would help the child in the beginning steps of reading in the first grade.

Another experiment involving at-risk kindergartners studied how small-group
intervention with storybooks helps students learn new words (Justice, Meier, & Walpole, 2005).
The goal of researchers was to examine the students’ learning of new words from the texts of
storybooks read repeatedly over time (intervention). Pre- and post-tests were conducted on
students randomly assigned to treatment (n= 29) or comparison (n=28) groups. Children in the
treatment group received 20 small-group storybook reading sessions during which they were
exposed to 60 new words. The pre- and post-test inspected the quality of children’s definitions for the new vocabulary words. The overall results showed that the students in the treatment group made significantly greater gains in word learning than comparison group. The most interesting part of this research study is the fact that the implications suggested using storybooks as a clinical tool for fostering vocabulary development in at-risk students. Furthermore, this shows the importance of early intervention programs for at-risk students.

Early Childhood Intervention Programs

Children characterized as being at-risk have some type of developmental delay either medically, biologically, environmentally, cognitively, socially, physically, or emotionally. The earlier at-risk children receive intervention, the lower their chances of long-term negative effects and the greater their chance of success in this society.

One area of focus for early childhood intervention programs is the child’s social emotional competency. Social emotional development is an aspect of school readiness, and children who are at-risk in this area are less likely to be successful in school (Stratton & Reid, 2004). Social emotional wellbeing of a child is a vital part of child development according to the National Education Goals Panel (Pappas, 1991).

One program that tries to meet this goal to help with long-term academic achievement is The Incredible Years Dinosaur Social Skills and Problem Solving Child Training Program (Stratton & Reid, 2004). This program centers on helping children manage their behaviors and emotions so they are able to have friendships in school. Children with a good social network at school are able to use their social network to assist them with assignments and projects. This gives the child an overall positive outlook on learning, which can all lead to success in school.
By providing children with that same social network at home, school readiness can emerge from supportive social relationships.

This program teaches emotional literacy, empathy and perspective of other people, friendship, communication skills, anger management, interpersonal problem solving, and how to succeed in school (Stratton & Reid, 2004). It is for preschool and elementary children between the ages of 3 and 8 years. It consists of seven units and 64 lesson plans. The curriculum for the lesson plans is based on theories in social emotional and cognitive development. Each lesson has specific skills that are taught 3 times a week in 15 to 20 minute large-group sessions followed by 20 minute small-group reflection and practice time. The goal is to give students necessary skills and tools to use throughout their education. Intervention programs show how early intervention can lead to later success. 3 intervention programs reviewed in this section are the Abecedarian Project, the Chicago’s Child-Parent Center Preschool Program and the Perry Preschool Project.

Chicago’s Child-Parent Center Preschool Program (CPC) began in 1967 and is the second-oldest federal preschool program and the longest-running extended early intervention program in America (Reynolds, Temple, Robertson & Mann, 2002). The program’s focal point was to offer preschool education for low-income minority children in high-poverty neighborhoods. CPC incorporated an integrated, coordinated, and centrally administered system of early childhood education, high parent participation, and an emphasis on well-paid teachers and ongoing professional development for teachers (Reynolds et al, 2002). Not only did the program results show that participants experience lifelong positive effects, but researchers also found that the timing of the intervention is a vital part of the outcome. The children who participated in the preschool program had better results than the children in the kindergarten and elementary school programs.
The Abecedarian Project is an example of an intervention program that helps with school readiness. The Abecedarian Project evaluates evidence on early childhood interventions from a controlled random assignment experiment (Campbell, 2002). From 1972 to 1977, the treatment group of 57 infants from low-income families received a high level of quality childcare: one year of home visitation and two years of preschool. Children in the treatment group were given personal plans that included activities geared towards social, emotional, and educational development while the control group of 54 infants received regular home school or other childcare from another facility. Results concluded that the Abecedarian Project had positive effects on children in the treatment group. In comparison to the control group, the treatment group had slight increases in verbal IQ, more years of completed education including college, more skilled jobs, and lower rates of teenage parenthood.

Another intervention program that agrees with the idea of giving children the necessary tools to be productive, contributing citizens was the High Scope / Perry Preschool Project. One of the most important things about this intervention is that it was not a quick fix; instead, the program had long-lasting, lifetime positive effects on the participants. The forty-year longitudinal study was started in Ypsilanti, Michigan in 1962 by David Weikart and colleagues (Schweinhart, 1994; Schweinhart, 2002). The purpose of the study was to evaluate the High Scope model, which is a program in which teachers help children plan, execute and review their individual educational activities. The design of the study randomly assigned one hundred twenty three African-American children living in poverty and at-risk of school failure to program and non-program groups. The study indicated that the high quality preschool program had positive effects on children’s school readiness for school and their future educational success. The High Scope Program participants had a 67% school readiness rate in comparison to the non-program
participants who had a school readiness rate of 28%. This program is even more evidence of the need for programs that help with school readiness and will later lead to academic achievement.

School Readiness Programs

School readiness is a term that has been around for a several years, but the definition has changed (Zuckerman & Halfon, 2003). Since the 1900’s, school readiness has been defined by a child’s age and used to delineate children who were not mature enough to start school. Ever since the National Education Goals Panel redefined the term in 1992, it is has now been defined as schools that are ready for children, children who are ready for schools, and parents and communities who are ready to support children’s development process. The way to measure whether a child is ready for school has been termed as school readiness. School readiness has five areas: physical, cognitive, social, emotional and positive attitude toward learning (NAEYC, 2004).

Head Start

One example of a successful comprehensive intervention program for young children is Head Start. Head Start is a complete child development program for families with children age-five and younger. The purpose of Head Start is to provide students an education and parents resources to help their children achieve academic success. (Head Start 2007, n.p.g). Through the Head Start program parents are provided information about their child’s educational future during home visits. The information given to parents includes activities that discuss the importance of their children finishing school and how their children’s education can help them break the cycle of poverty. As much as the Head Start program’s impact on children’s achievement at school demonstrated that the implementation of a program prior to school was vital.
Children in the Head Start program were studied to determine the effects of book reading sessions as a form of early intervention (Justice et al, 2002). All children were given a pretest based on print focus and print awareness, and then the children were placed in two groups, experimental and control. The experimental group received shared reading sessions with print focus, whereas the control group received shared reading without print focus. When the children completed the post-test, the children in the experimental group outperformed the children in the control group. As a result, the exposure to books at an early age helped the children in the study to be successful. This program is for children who are already in school. The need then arises for a program to help parents of children who are too young to start school but old enough to start learning language and book awareness.

The connection between language and interaction is an important part of school readiness. Reading to a child, for example, gives the child exposure to oral and written language, which is a part of school readiness; the interaction of spending time together reading is a part of parent involvement. When language and interaction work together, this can be the beginning of future academic success for the child. One program that is based on this language and parent interaction is the HIPPY program.

The HIPPY Program concept of equipping parents with the necessary tools and learning resources to effectively teach their young children basic concepts they will need for schools is aligned with the sociocultural theory. The sociocultural theory states that learning begins at home and that young children connect daily experiences to learning patterns. Since HIPPY capitalizes on this theory, it can be used to provide parents with strategies to teach their children school readiness skills that they will use to build their learning. The HIPPY Program has shown to have
a positive impact on learning and future research is needed in this area to explore the specific areas of the program that are effective in teaching school readiness to young children.

This section provided a detailed overview of the sociocultural theory. Examples of literacy programs, school readiness and early intervention programs were also provided. The section concluded with a brief statement of the importance of HIPPY program to school readiness and academic achievement.
APPENDIX B
OTHER ADDITIONAL MATERIALS
Definition of Key Terms

The definitions of the key terms listed below are terms that were used in relation to this research study.

*At-risk* – A child who comes from a family that is financially disadvantaged and does not have the resources or knowledge of necessary resources and strategies to aid the child’s academic achievement

*Intervention* - A program designed to prevent students from experiencing further problems in academic achievement

*Parent involvement* - Parents engaging in their child’s academic career through activities at home and school

*Scaffolding* – specialized support caregivers and / or teachers provide for the child

*School readiness* - A set of predetermined skills necessary for preschool students to attain prior to starting pre-kindergarten or kindergarten

*TAKS* - Texas Assessment of Knowledge and Skills is a statewide-standardized exam that measures the state curriculum Texas Essential of Knowledge of Skills, TEKS. This exam includes Reading/English Language Arts, Writing, Mathematics (Math), and Science.
### PART 1 — CHILDREN IN SCHOOL - (Use a separate application for each foster child)

<table>
<thead>
<tr>
<th>Student ID</th>
<th>Names of all children in school</th>
<th>School Code</th>
<th>Grade</th>
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<tbody>
<tr>
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<td>Last Name</td>
<td>First Name</td>
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</table>

### PART 2 — FOSTER CHILD

If this application is for a child who is the legal responsibility of a welfare agency or court, place an **X** in the box and list the amount of the child's personal use monthly income. Skip to Part 4.

<table>
<thead>
<tr>
<th>Personal Use Monthly Income</th>
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<td>$</td>
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</table>

### PART 3 — HOUSEHOLD MEMBERS AND GROSS INCOME FROM LAST MONTH - (List each person in the household. For each person who receives income, write the amount received and fill in how often it is received.)

1. Name (List everyone in Household)

2. Income and how often it is received: **W** = Weekly, **E** = Every 2 weeks, **T** = Twice per month, **M** = Monthly

<table>
<thead>
<tr>
<th>Earnings from work Before Deductions</th>
<th>Welfare Payments, Child Support, Alimony</th>
<th>Pension, Retirement, Social Security</th>
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<tbody>
<tr>
<td>How Often?</td>
<td>How Often?</td>
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<tr>
<td>Example: Smith, Jane B.</td>
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</table>

3. Mark Box if No Income

### PART 4 — SIGNATURE AND SOCIAL SECURITY NUMBER - (Adult Must Sign)

As an adult household member must sign the application. If Part 3 is completed, the adult signing the form must also list his or her Social Security Number or mark the "I do not have a Social Security Number" box. (See Privacy Act Statement on the instruction page)

I certify (promise) that all information on this application is true and that all income is reported. I understand that the school will get Federal Funds based on the information I give. I understand that school officials may verify (check) the information. I understand that if I purposely give false information, my children may lose meal benefits, and I may be prosecuted under state and federal statutes.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Today's Date (MMDDYY)</th>
<th>Social Security Number</th>
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<tbody>
<tr>
<td>X</td>
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<table>
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<tr>
<th>Printed Name</th>
<th>Home Phone Number</th>
<th>Work Phone Number</th>
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Irving Independent School District
HOME LANGUAGE SURVEY
Cuestionario del idioma que se habla en el hogar

If student is transferring within district do not complete another SURVEY. This form is to be filled out only upon initial enrollment into HSDL.

REQUIRED FOR ALL STUDENTS (Please complete in ink)
Debe de completarse por el padre o representante legal; el estado de Texas requiere que la siguiente información se complete.

I. STUDENT INFORMATION:
Student's Name ___________________________ M / F Grade ___________
Nombre del Estudiante Hombre/Mujer Grado
Address __________________________________ Phone: _______________________
Dirección de domicilio Número Teléfono
Age ______ Date of Birth ______ / ______ / ______ Parent/ Guardian
(As of Sept. 1) Month Day Year Nombre del padre/guardián o representante legal
Edad (hasta 1 de septiembre) Fecha de nacimiento, mes / día / año

II. HOME LANGUAGE SURVEY (Must be completed upon enrollment):
1. What language is spoken by your child? ¿Qué idioma habla su niño(a)?
   Con anh chi noi ngon ngu nho?
   Parent/Student Signature (Firma) Date/ Fecha/ Ngyer ______ / ______ / ______
   Chu ky cua phi hungi/ Hoc sinh (Month/Mes/Tang) (Day/Día/Nguy Year/Año/Nam)

If student has a language other than English, proceed to Step III. If student has English only, file in student's Permanent Cumulative folder.

III. BACKGROUND INFORMATION:
Is student currently in a Bilingual/ESL program? YES____ NO____
Previous education completed:
Country of Origin __________________________ Date First Entered U.S. School ____________
Has your child lived outside the United States for two or more consecutive years? __yes ___ no. If yes, indicate when: ____________________________
(insert month/year to month/year)

When your child lived outside the United States, did he or she attend school regularly? (Check one)
____ Yes, my child attended school regularly in all previous grades outside the US.
____ No, my child missed significant portions of one or more school years, as specified:

Specify grade and time period, including month and year (example: Grade 2, January 2003 through May 2003). Do not include periods of absence that lasted less than one month. Do not include regularly scheduled school holidays or vacations.

Interviewer: __________________________ Language Used: ____English _____Spanish _____Other

Parent Signature (Firma del padre/guardián) Date (Fecha)

OFL-880 FORM #10220005 Revised 4/2007
COMPREHENSIVE REFERENCE LIST


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