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THE HOME LITERACY ENVIRONMENT'S EFFECT ON LANGUAGE AND  
LITERACY OUTCOMES IN MONOLINGUAL AND BILINGUAL FIRST AND  
SECOND GRADE STUDENTS

BY

SARAH E. CARNEY

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE  
IN  
SPEECH LANGUAGE PATHOLOGY

UNIVERSITY OF RHODE ISLAND

2022

MASTER OF SCIENCE IN SPEECH LANGUAGE PATHOLOGY

OF

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UNIVERSITY OF RHODE ISLAND

2022

## ABSTRACT

The Home Literacy Environment (HLE) is well researched to support early literacy development in children (e.g., Niklas et al., 2020; Inoue et al., 2018). The majority of research has investigated how the HLE supports children's preschool literacy development and skills upon entry to kindergarten; however, few research studies have addressed how the HLE contributes to vocabulary, phonological awareness, and reading scores in Spanish-English bilingual first and second grade students. Our present study aims to answer two questions; if Parental Occupation Education (POE) and the HLE affect performance on *inside out* (phonological awareness and decoding) and *outside in* (language and vocabulary) outcome variables in monolingual and bilingual first and second graders and determine how much of the variance is explained by the POE and HLE in regards to these outcome variables. Fourteen Spanish-English bilingual and 27 English monolingual first and second graders participated in the study. Using multivariate regression analyses, our findings indicate that the HLE and POE significantly predict oral language (an outside in skill) and phonological awareness skills (an inside out skill) in our sample population. These results support the expansion upon research surrounding the HLE for early school-aged monolingual and bilingual learners. Implications for intervention and further research are discussed.

## **ACKNOWLEDGEMENTS**

I want to express my utmost gratitude to my mother, who has fulfilled within me a true example of dedication, passion, and the desire to make small ripples within the field of special education. I would like to express my sincere gratitude to my thesis mentor, Dr. Alisa Baron, for her support and time that she has dedicated to helping me navigate and pursue the thesis process. Finally, I would like to express gratitude to my thesis committee, all CCNL members who coded data, and to all participants and families who dedicated their time to participate in research.

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## **CHAPTER 1**

### **INTRODUCTION**

The Home Literacy Environment (HLE) is a well-researched physical and relational construct that encompasses activities, attitudes, and materials in the home that enhance and contribute to a child's overall literacy competencies (Niklas et al., 2020). Researchers have expanded on how the HLE affects students beyond kindergarten, however, few research studies have addressed how the home literacy environment contributes to vocabulary, phonological awareness, and reading scores in Spanish-English bilingual first and second grade students. The aim of this study was to investigate the relationship between the HLE, Parental Occupation and Education (POE) and their effects on inside out (phonological awareness and decoding) and outside in (language and vocabulary) outcomes in Spanish-English early school-aged children.



## CHAPTER 2

### REVIEW OF THE LITERATURE

#### *The Home Literacy Environment and its Connection to Literacy*

Parental attitudes towards reading, participation in literacy activities, and capital of literary resources in the home encompass a “multifaceted” HLE and are influential factors in literacy development of children who are emerging and early readers. Activities include: direct teaching of letter sound relationships and shared book reading and materials include access to books and manipulatives. Attitudes encompass parents’ views towards reading; for example, if reading is encouraged and if their kids see them reading (Niklas et al., 2020). HLEs that encourage a diversity of direct and indirect literacy practices have been shown to increase phonological awareness (Inoue et al., 2018), overall vocabulary, and decoding skills (Philips & Lonigan, 2009; Sénéchal & LeFevre, 2002). Whitehurst and Lonigan (1998) had suggested that literacy skills can be divided into 2 main categories: outside in and inside out skills. Outside in skills were defined as conceptual understanding of “the context in which the writing they are trying to read occurs,” and inside out skills were defined as, “children’s knowledge of the rules for translating the particular writing they are trying to read into sounds” (p. 854). Inside out skills are associated with word reading skills and outside in skills are those needed to understand what is read. Furthermore, HLEs that encouraged both inside out (phonological awareness, decoding, and letter knowledge) and outside in (language, vocabulary, content, narrative understanding, and conceptual knowledge) literacy skills, predicted later reading and writing skills (e.g., Inoue et al., 2018; Sénéchal & LeFevre,

2002; Whitehurst & Lonigan, 1998). In bilingual French-English students, HLEs encouraging informal (print is not the primal focus) and formal tasks (attention to print directly) were linked to growth in receptive vocabulary in kindergarten children and overall reading skills by first grade (Sénéchal & LeFevre, 2014). Additionally, students whose parents had more positive attitudes towards reading resided in better quality HLEs (Niklas et al., 2020).

The HLE includes both inside out and outside in skills which are based upon Whitehurst and Lonigan (1998) theory of emergent literacy. The theory proposed that children's reading skills are broken into two parts that are both necessary to form a skilled reader. Other theories, such as the *Simple View of Reading* have also broken down reading into two components: decoding and language comprehension, and the product of the two form reading comprehension (Gough & Tunmer, 1986); and the *Reading Rope* (Scarborough et al., 2009), which separated skilled reading into two overarching categories: language comprehension and word recognition, with several subcomponents such as phonological awareness and background knowledge included within the overarching categories. Therefore, inside out and outside in variables will be discussed, as well as their corresponding subcomponents.

### *Phonological Awareness and Decoding*

Phonological awareness is the ability to identify and manipulate the auditory signal at the word level as measured through tasks such as: phoneme segmentation, syllable breakdown, elision, and rhyming (e.g., Anthony & Francis, 2005). According to the National Reading Panel, phonological awareness is one of the 'Five Pillars of Early Literacy.' Therefore, phonological awareness, specifically phonemic awareness, is a

pertinent factor to measure as it is considered one of the best predictors of reading skill in children (e.g., Hulme et al., 2002). Children with reduced phonological awareness skills have more difficulty with reading and writing, which are skills necessary for academic advancement and achievement (e.g., Anthony & Francis, 2005; *National Reading Panel*, 2000).

Measuring phonological awareness skills in young children is important because they lay the foundation for literacy success. Further, by investigating the relationship between the HLE and phonological awareness, we can determine how activities that occur in the HLE can contribute to stronger phonological awareness skills in both monolingual and bilingual children. It is unclear as to exactly which activities, attitudes, or practices in the home affect or directly influence phonological awareness performance in first and second graders. The National Reading Panel suggested methods of reading strategies including using direct teaching practices to increase phoneme awareness skills (*National Reading Panel*, 2000) and researchers have since measured direct teaching in the home and its effect on phonological awareness skills (e.g., Inoue et al., 2018; Inoue et al., 2020; Sénéchal & LeFevre, 2014). For first and second graders learning various orthographies, direct parent teaching of literacy skills in the home was associated with increased phonological awareness in several Indo-European languages (Inoue et al., 2020). In monolingual kindergarten through third graders, phonological awareness was uniquely associated with direct parent teaching (Inoue et al., 2018). However, in other studies, direct teaching within the HLE did not predict phonological awareness in monolingual children (Georgiou et al., 2021) or phoneme awareness in bilingual French-English children (Sénéchal & LeFevre, 2014).

Shared book reading is another activity that researchers have studied with regards to the HLE and children's development of phonological awareness skills. It is known that "cultural capital," or the number of books in the home, has a significant impact on literacy outcomes, especially for children beginning kindergarten (e.g., Georgiou et al., 2021; Inoue et al., 2020; Niklas et al., 2020). It is important to note that shared book reading and direct teaching of phonological awareness can be regarded as separate activities. Though both activities can co-occur in a HLE, the two are identified as separate entities in the majority of research surrounding HLEs. In a research study by Anderson and colleagues (2018), which measured shared book reading's effect on literacy outcomes in kindergarteners, the most significant factor in predicting letter naming and phoneme manipulation was not shared book reading frequency, but the act of "stopping and asking the child about letters or words" (p. 2167). Therefore, shared book reading can be defined as the frequency or duration of the child being read to within the home and direct teaching can be defined as direct instruction of phonological awareness and letter identification (e.g., Anderson et al., 2018). For example, a parent may read to their child twice a week and engage in shared book reading but may not teach the child to identify letters or encourage letter-sound correspondence within shared reading.

Previously, shared book reading has been associated with reading skills beyond letter identification and manipulation for kindergarten children (Anderson et al., 2018). More recent research has investigated whether shared book reading influences phonological awareness skills. There are some researchers who have concluded that shared book reading is not associated with English phonological awareness skills in children, or other emergent literacy skills (e.g., Georgiou et al., 2021; Inoue et al., 2020).

This suggests that “parents may not necessarily know how to effectively engage their children in shared reading activities” (Inoue et al., 2020). The frequency of shared book reading in the home may decrease from grades 1 to 3. This may be due to the fact that children become more independent readers as they get older which in turn leads to reduced shared reading in the home (Georgiou et al., 2021). Therefore, focusing on direct teaching of phonological awareness is important to examine given the previous findings suggesting that shared book reading may not directly impact phonological awareness development.

Researchers have reported growth in phonological awareness skills in monolingual children in the school setting and predicted higher scores if direct teaching of phonological awareness was incorporated in the home setting (e.g., Inoue et al., 2020, Inoue et al., 2018; *National Reading Panel*, 2000). However, it is unclear whether direct teaching in the home setting affects bilingual children’s reading scores. In a longitudinal study conducted with children from kindergarten to second grade, who were educated in French but spoke English in the home, phonemic awareness skills were not influenced by the HLE (Sénéchal & LeFevre, 2014).

Phonological awareness is a fundamental early literacy skill and predicts literacy success in early childhood (e.g., Hulme et al., 2002; *National Reading Panel*, 2000). The HLE is an environment in which children can build upon early literacy skills to improve their reading. Direct teaching surrounding literary material has been used as a guide to improve reading strategies within public schools (*National Reading Panel*, 2000). Furthermore, direct parent teaching in the home has inconsistent findings regarding an association (or lack thereof) between home activities and phonological awareness skills

in both monolingual and bilingual children (e.g., Georgiou et al., 2021; Inoue et al., 2018; Sénéchal & LeFevre, 2014). However, there are other findings stating that shared book reading has no effect on phonological awareness skills in monolingual children (e.g., Georgiou et al., 2021; Inoue et al., 2020). In sum, research surrounding HLE activities and phonological awareness skills demonstrate inconsistencies in the literature surrounding measuring phonological awareness in the HLE with monolingual and bilingual children beyond kindergarten. Furthermore, a gap in the literature exists in both defining and measuring what constitutes an effective HLE as well as accounting for potential differences in bilingual children.

Phonological awareness is foundational for developing sound-letter correspondence skills necessary for reading (e.g., Hulme et al., 2002). Inside out skills are considered representative of “children’s knowledge of the rules for translating the particular writing they are trying to read into sounds” (Whitehurst & Lonigan, 1998, p.853). Furthermore, inside out skills rely on children’s decoding abilities as well as phonological awareness, syntactic awareness, and letter identification (Whitehurst & Lonigan, 1998). Therefore, it is considered necessary to measure phonological awareness and decoding in regards to reading outcomes in children. Decoding is sometimes measured using nonwords or “pseudowords,” because children cannot use previous knowledge of words that they already know and have to rely solely on their letter-sound correspondence skills to decode the word. In our present study, we chose to use a nonword reading fluency subtest to measure decoding.

*Vocabulary and Oral Language*

Oral language can be defined as spoken language, including the elements of syntax, phonology, semantics, pragmatics, and morphology. Children must understand language to use it, and in early childhood, children develop receptive language skills before expressive language skills (e.g., Saffran et al., 2001). The home is one of the first environments where children begin to develop oral language as caregivers interact with children and provide language models and opportunities for interaction. Shared book reading, which can be defined as the event in which the parent reads together with their child, promotes growth in oral language skills rather than focus on the print itself (Sénéchal & LeFevre, 2014). Receptive vocabulary, which is a component of oral language, contributes to the greater lexical picture of understanding language and can be defined as one's understanding of words. Oral language skills may be connected to shared book reading due to a child's exposure to rich language that may take place during story reading.

The HLE is a predictor of literacy and oral language skills before children enter kindergarten, (Rodriguez & Tamis-LeMonda, 2011), as well as a predictor of receptive vocabulary scores for both monolingual and bilingual children during kindergarten (e.g., Griffin & Morrison, 1997; Yeomans-Maldonado, 2021). In kindergarten, the HLE explains the variability in vocabulary knowledge, but does not predict growth in receptive vocabulary beyond kindergarten (Yeomans-Maldonado, 2021). Griffin and Morrison (1997) have also noted that receptive vocabulary was only significant after IQ and SES were removed from their model (other factors included in their model were: maternal education, entrance age into kindergarten, preschool experience, race, and gender). This

suggests that the HLE may not be a significant predictor of receptive vocabulary acquisition when compared to other factors.

Measurement of bilingual children's vocabulary in regard to the HLE has also been studied. Lewis et al. (2015) used a regression analysis to predict if bilingual preschooler's vocabulary and oral language comprehension were related to language exposure and literacy practices in the home, specifically with mother-child interactions. The participants in this study were labeled as receptive bilinguals. Spanish exposure in the home and frequency of mother-child book reading predicted Spanish oral language comprehension. The more children were exposed to Spanish by their mothers, the higher their oral language comprehension skills were overall. However, children's use of Spanish was not predictive of oral language comprehension potentially due to the fact that they were receptive bilinguals. Furthermore, both frequency of language exposure (through maternal language) and child use of Spanish were significant predictors of receptive Spanish vocabulary.

Within the HLE, mother-child book reading was also a predictor of receptive Spanish vocabulary. Interestingly, children's use of English and exposure to English did not predict English vocabulary outcomes or English oral language comprehension. The only home literacy predictor of English oral comprehension was the child's frequency of storytelling. Though frequency of storytelling was a predictor of English oral comprehension, the language that storytelling was conducted in was not reported; additional research would be beneficial to form more concrete conclusions. Results from this study may outline the effects of language exposure in receptive bilingual children,



indicating that receptive bilingual children benefit in unique ways from exposure to and use of both languages (Lewis et al., 2015).

The number of books in the home and access to literary resources, is frequently studied in regard to HLEs (e.g., Georgiou et al., 2021; Inoue et al., 2020). For first and second graders, Inoue et al. (2020) noted that access to literary resources influenced receptive vocabulary inventory in children learning English, Dutch, German, and Greek. Sénéchal and Lefevre (2014) reported that the HLE predicted growth in receptive vocabulary from kindergarten to first grade, suggesting that the home environment may still influence receptive vocabulary after kindergarten. More definite conclusions are needed to determine which aspects of the HLE contribute to fostering greater oral language and vocabulary skills in monolingual and bilingual children beyond the preschool years. Since oral language is a combination of the language elements of form, content, and use and is dependent upon a child's receptive vocabulary inventory, it is not surprising that several research studies have predicted children's oral language through measuring the HLE.

### *Socioeconomic Status*

Socioeconomic Status (SES) can be measured by a “combination of education, income, and occupation” and “often reveals inequities in access to resources, plus issues related to privilege” (*Socioeconomic status*). Since SES is a way to classify a status that surrounds a home, SES, along with HLE, could affect children in similar ways, given how highly they are connected. Several studies have quantified the relationship between SES and the HLE, reporting that households with lower SES have a poorer quality HLE

(e.g., Park, 2008; Payne et al., 1994). Given these findings, the relationship between SES and the HLE is important to investigate within our study.

Kirby and Hogan (2008) discussed implications that help to explain the correlations between SES, HLE, and first grader's reading ability for students labeled as "poor" and "good" readers. Initial qualification of "good readers" and "poor readers" was measured through phonological processing and word reading tasks. Separation into groups (good vs. poor readers) highlighted the effects of both HLE and SES on reading outcomes. Households with children labeled as "good" and "poor" readers were significantly different when compared to one another, and that SES and the HLE were both factors that could independently describe group classifications. In other words, SES could accurately group a "poor" vs. "good" reader. More specifically, maternal education was the most significant predictor for reader classification. In sum, first grade students with lower reading scores tend to come from households with lower SES and HLEs with less frequently occurring literary activities (Kirby & Hogan, 2008). However, other studies emphasize the quality of HLE activities over the frequency of activities occurring (e.g., Inoue et al., 2020).

SES has also been investigated regarding language and literacy outcomes in Spanish-English bilingual children. Luo et al. (2021) focuses on the SES gap noted in preschool bilingual children. Their findings concluded that HLE was a mediator between SES and language learning. In another study, the SES of bilinguals significantly predicted accuracy of English reading in kindergarten and reading comprehension in third grade. However, the measure of reading accuracy used in this study was picture to word matching and identification of high and low frequency words rather than a true measure

of decoding, such as measuring the alphabetic principle with the requirement of reading nonwords (Howard et al., 2014).

Within HLEs, the number of books in the home is frequently measured. As discussed previously, the number of books in the home is a significant indicator of later reading success, specifically associated with vocabulary and emerging literacy skills (e.g., Inoue et al., 2020; Yeomans-Maldonado, 2021). Children who come from families of low SES, tend to have less books in the home (e.g., Capotosto, 2020). Furthermore, a study examining third graders from low SES backgrounds, found that children labeled as “poorer readers” had, on average, books that were significantly above their reading level (Capotosto, 2020). Recent literature surrounding SES suggests that children from low SES may have fewer books in the home and less books that are appropriate to their reading skills. Though low SES is correlated with less “favorable” HLEs, Park’s (2008) research highlighted the fact that although children from low SES households are disadvantaged compared to children from high SES households, literary activities are still taking place within low SES households.

It is important to note the dialogue that many research articles may use surrounding homes of lower SES. Compton-Lilly and colleagues (2012) emphasize that families can be morphed into a category of either “possessing literacy strengths or lacking in literate abilities” (Compton-Lilly et al., 2012, p. 33), which can grossly isolate and segregate other literacy practices within the home that are not emphasized in U.S schools. Compton-Lilly (2012) also outlined the “match and mismatch of home and school literacy practices” in which school-based literacy practices are often used as a measure of “true” literacy skills within the home environment (p. 34). Furthermore, it is

important to emphasize that research surrounding students from low SES backgrounds may be measuring school emphasized literacy competencies and neglecting home literacy practices that may look different from school. Therefore, we should be cautious when looking at children with low SES in regards to literacy from a deficit perspective, and suggest that as a whole, we should be “challenging literacy as a school-defined construct” (Compton-Lilly et al., 2012, p. 50).

Research has supported that the HLE has a role in children’s literacy outcomes. Less is known whether the HLE continues to support literacy skills in early school-age children, and what activities in the home can help support literacy enrichment beyond kindergarten. Phonological awareness is, in some studies, associated with direct teaching of letter-sound relationships in the home (e.g., Georgiou et al., 2021; Inoue et al., 2018; Sénéchal & LeFevre, 2014). Oral language and vocabulary are associated with the amount of language exposure in bilingual preschoolers (Lewis et al., 2015), shared book reading in bilingual French-English kindergarten through first graders (Sénéchal & LeFevre, 2014), and materials within the home for first and second graders (e.g., Georgiou et al., 2021; Inoue et al., 2020). In our study, we will specifically discuss Spanish-English bilingual children’s oral language outcomes since bilingual children have to navigate a range of English, Spanish, and bilingual spaces in both the home and school environments, and few studies have investigated this unique relationship between oral language and the HLE. Furthermore, the HLE can be modified to support literacy skills, making it a potential environment in which monolingual and bilingual first and second grade students can increase their literacy skills (e.g., Niklas et al., 2020).

Based on the current state of the literature, these are research questions proposed to address the gaps in the literature:

1. Does the HLE and Parental Occupation and Education (POE) affect performance on inside out (phonological awareness and decoding)? How much variance is explained by the HLE and POE in these outcome variables?

2. Does the HLE and Parental Occupation and Education (POE) affect performance on outside in (language and vocabulary) outcome variables in monolingual and bilingual first and second graders? How much variance is explained by the HLE and POE in these outcome variables?

## CHAPTER 3

### METHODOLOGY

#### *Participants*

Research was conducted in the Fall of 2019 with support from the Rhode Island IDeA Network of Bio-Medical Excellence (RI-INBRE) award. Twenty-seven English-speaking monolinguals, 9 Spanish-English bilinguals, and 5 receptive bilingual first and second grade students participated in the study (15 females,  $Mean_{age} = 7.24$  years,  $SD_{age} = .71$ ). Given the data reported, 17 participants identified as Hispanic/Latino, 23 participants identified as non-Hispanic, and 1 participant did not report. Among the population, 16 participants identified as White, 13 participants did not report, 8 participants identified as More than Once Race, 3 participants identified as Black/African American, and 1 participant identified as American Indian/Alaska Native. The term “receptive bilinguals,” is described as individuals who comprehend their native, or heritage language, but have limited production ability in said language (Parada, 2020). Here, we consider Spanish the native, or heritage language for the bilingual children. Qualification of bilinguals was based upon results from the Bilingual Input/Output Survey (BIOS) where parents reported children’s frequency of use and exposure to both Spanish and English throughout the day and extrapolated to a typical week. Receptive bilinguals were those considered to have less than 20% current Spanish use.

All students participated in both behavioral language and literacy assessments. All receptive bilinguals attempted to, but were unable to complete standardized testing in Spanish, however the rest of the bilinguals did complete all behavioral testing in both languages. In our sample population, all bilingual participants could not read in Spanish.

Two students were excluded from the sample due to enrollment in special education services, and one student was excluded from the sample as a parent was unable to be contacted to complete the HLE questionnaire.

### *Behavioral Procedure*

The participants were assessed in the areas of: language, literacy, and cognition. The tests administered in English to all participants were the:

1. *Clinical Evaluation of Language Fundamentals-5th Edition* (CELF-5; Wiig, Semel, & Secord, 2013). The CELF-5 measures overall language performance in children, and the core language composite score was used as the measure of oral language skill.

2. *Comprehensive Test of Phonological Processing-2nd Edition* (CTOPP-2; Wagner et al., 2013). The CTOPP-2 measures phonological processing including phonological awareness, phonological working memory tasks, and rapid automatized naming. For the purpose of this study, the composite score for phonological awareness for children ages 7 and older was used which encompasses elision, blending words, and phoneme isolation tasks. For children ages 5-6, the composite score of the subtests elision, blending words, and sound matching was used.

3. *The Dynamic Indicators of Basic Early Literacy Skills* (DIBELS; University of Oregon, 2018). In coherence with the National Reading Panel, the DIBELS measures phonological awareness, phonics, fluency, and comprehension, which are four of the five pillars of literacy acquisition. For this study, we used a composite score of the correct letter sounds (CLS) subtest and words read correct (WRC) subtest for nonsense word fluency (NWF) to measure decoding. According to the DIBELS Administration and

Scoring Guide, the nonsense word fluency subtests are considered a true measure of decoding because prior vocabulary and knowledge of sight words cannot help the child read the word (DIBELS; University of Oregon, 2018). Other studies have also used nonsense words as a measure of decoding (e.g., Kirby & Hogan, 2008).

4. The *Receptive One-Word Picture Vocabulary Test* (ROWPVT-4; Martin & Brownell, 2011). The ROWPVT measured receptive vocabulary in children.

5. The *Wechsler Abbreviated Scale Intelligence-2nd Edition* (WASI-2; Wechsler, 2011). The WASI-2 includes several subtests to measure non-verbal IQ. Specifically, we included the perceptual reasoning composite.

Bilingual participants were additionally assessed with the:

1. *Test of Phonological Processing–Spanish* (TOPP-Spanish; Francis et al., 2001).

The TOPP-Spanish measures phonological processing and is the Spanish equivalent of the CTOPP-2.

2. *Clinical Evaluation of Language Fundamentals–Fourth Edition, Spanish* (CELF-4 Spanish; Semel, Wiig, & Secord, 2006). 3. *Receptive One Word Picture Vocabulary Test–4th Ed Spanish Edition* (ROWPVT-4 Spanish; Martin, 2012).

4. *Indicadores Dinámicos del Éxito en la Lectura* (IDEL; Baker, Good, Knutson, & Watson, 2006). The IDEL is a Spanish administered equivalent of the DIBELS.

5. The *Bilingual Input/Output Survey* (BIOS; Peña, Gutiérrez-Clellen, Iglesias, Goldstein, & Bedore, 2018). The BIOS is a questionnaire used to determine the frequency and extent of language use in bilingual children as well as demographic and socioeconomic information (e.g., parent level of education, parent occupation, parent country of origin, language dialect, free/reduced/regular lunch, age, race, ethnicity,



biological sex, length of language exposure, etc). Parents of all participants were asked to complete the BIOS. Parents reported on when and contexts in which each language has been used on a year-to-year basis. Parents also reported on what language the child hears and uses during a typical weekday and weekend day on an hour-by-hour basis. With this data, an objective measure of each child’s input and output was calculated for each language.

For the purposes of this study, the CELF-5, CTOPP-2, DIBELS, ROWPVT-4, and ROWPVT-4 Spanish were used.

### *Conceptual Vocabulary Scoring*

To provide a more accurate representation of total vocabulary knowledge, a conceptual scoring approach was used for all bilingual participants. Our conceptual scoring method was based on a study conducted by Anaya et al. (2018), concluding that bilingual children often “code-mix” lexical terms in both languages, switching between their two languages at varying hierarchies of expressive language (word level, conversational level, etc.). More recent ideologies have discussed the term ‘translanguaging’ to represent a more inclusive definition that bilingual children “draw on diverse linguistic features and resources from a singular linguistic repertoire” and use them ‘flexibly’ (Ascenzi-Moreno, 2018, p.356). Therefore, single language testing is not considered a comprehensive representation of total vocabulary knowledge for bilingual children. When scoring the ROWPVT-4, a correct mark for each vocabulary word was given if the child demonstrated knowledge of the picture stimuli in either Spanish or English, enabling a more accurate representation (e.g., Pearson et al., 1993).

Administration procedures were slightly modified in that the English and Spanish-English versions of the ROWPVT-4 were administered as English-only and Spanish-only versions, respectively. Therefore, bilingual and receptive bilingual students had two scores for vocabulary outcome measures in each of the languages. Using the premise of conceptual scoring, any item that was marked incorrect on the English ROWPVT-4 was reviewed with the Spanish ROWPVT-4. If the participant did not know the term in English, but knew the term in Spanish, a correct mark was given to account for the participant's conceptual knowledge of the item (regardless of which language they knew the word). Scoring followed basal and ceiling rules for both versions of the ROWPVT-4. The total raw score was used for the measure of vocabulary.

Lastly, all parents of both monolingual and bilingual participants were given a Home Literacy Environment Checklist (HLEC; Get Ready to Read; NCLD, 2012) to measure at-home literacy activities, practices, and attitudes. Please see below a description of this measure.

#### *Home Literacy Environment Checklist*

All parents of both monolingual and bilingual participants were given a Home Literacy Environment Checklist (HLEC; Get Ready to Read; NCLD, 2012) to measure at-home literacy activities, practices, and attitudes (*See Figure 1*). For each student, one parent was asked to participate in the HLEC in whichever language the parent/guardian preferred (either English or Spanish). The HLEC was created by the *Get Ready to Read!* project sponsored by The National Center for Learning Disabilities. One of the principal investigators read each statement out loud and clarified any confusion to the parent. The HLEC was designed to assess home literacy activities, resources, and attitudes in the

home environment. Thirty-seven statements were included in the HLEC, requiring a parent or guardian to mark “true” or “false” to statements regarding home literacy activities, capital, and attitudes. As the HLEC is typically used with younger children, several statements within the HLEC were modified to fit more appropriately to our early school-age population. For example, statements such as, “My child has at least 10 picture books,” were modified to say, “My child has at least 10 books,” as most of the children in our study are beyond the picture book level of reading. The HLEC total score was used for all analyses.

#### *Parental Occupation and Education (POE) Measurements*

For each participant, one parent completed a Bilingual Input/Output Survey (BIOS) language questionnaire (Peña et al., 2018) providing information on demographics, and parental education and occupation of both parents. In this study, we use the term “parental occupation and education (POE)” instead of SES to mitigate bias as SES may not be representative of the whole picture of the “social status” of a child, and is measured differently in each study. Research surrounding SES has recognized the term in a more dynamic lens, meaning that SES can change and develop over a person’s lifetime. Research reports that disparities in the reliability of measuring SES can lead to “misinterpretation of the study’s results” (Shavers, 2007, p. 1014). Some studies use a measure of a child’s enrollment in free lunch programs, or maternal education, or a composite score of education and occupation to measure SES. Thus, we use POE to be more specific and consistent in what aspect of SES we intend to measure.

Using the information reported on the language questionnaire, a scaled score was computed to generate the POE composite. Using Hollingshead’s Four Factor Index of

Social Status (1975), parental education was coded on a seven-point scale (7 = graduate/professional training, 6 = standard college or university graduation, 5 = partial college, at least one year of specialized training, 4 = high school graduate, 3 = partial high school, 10th or 11th grade, 2 = junior high school, including 9th grade, 1 = less than 7th grade, 0 = not applicable or unknown) and paternal occupation was coded on a nine-point scale (9 = higher executive, proprietor of large businesses, major professional, 8 = administrators, lesser professionals, proprietor of medium-sized business, 7 = smaller business owners, farm owners, managers, minor professionals, 6 = technicians, semi-professionals, small business owners (business valued at \$50,000-70,000), 5 = clerical and sales workers, small farm and business owners (business valued at \$25,000-50,000), 4 = smaller business owners (< \$25,000), skilled manual laborers, craftsmen, tenant farmers, 3 = machine operators and semi-skilled workers, 2 = unskilled workers, 1 = farm laborers, menial service workers, students, housewives, (dependent on welfare, no regular occupation), 0 = not applicable or unknown). Each number value given to paternal education and occupation were added together to form a total score from zero to sixteen. For single parent participants, POE was measured by the composite scores of the reported paternal education and occupation. For the remaining participants with two parents, each parent's composite score was averaged together to create a mean POE score.

## CHAPTER 4

### FINDINGS

Five regression models were conducted to answer the research question posed. HLE, POE, grade, and age were included as predictor variables in each model to predict each outcome of interest: inside out variables = 1) NWR fluency, 2) Phonological Awareness, outside in variables: 3) Oral Language, 4) Vocabulary. Additionally, a post-hoc regression analysis was completed to further investigate real word reading fluency (WRF) as a measure of decoding. Specifically, age/grade were included in NWF, WRF, and decoding regression models because raw (non-standardized) scores were used. Additionally, the interaction between HLE and POE was included in each regression model but removed if not significant. Therefore, an interaction term between HLE and POE was discussed only in regard to phonological awareness.

The data was checked for outliers. One participant had an HLE of 12 which was more than 2.5 SD below the mean. Thus, this participant was excluded from the following regression models as it could have skewed the data and led to inaccurate interpretation of the results.

Results indicate that any model with a p-value below .0125 (Bonferroni correction due to multiple comparisons) is considered statistically significant. Tables 1-5 are included below for representation of the data. A t-test was used to compare the mean POE between groups by language status. The mean POE score for monolinguals was 5.58 and 3.25 for bilinguals,  $t(23.722) = 5.3363$ ,  $p = < 0.001$ , suggesting that monolinguals had significantly higher POE scores when compared to bilinguals. Further implications of mean difference in POE is considered in the discussion section of this paper.

### ***Nonsense Word Reading Fluency (NWF) - Decoding***

To measure NWF, a composite of the correct letter sound (CLS) subtest and words read correct (WRC) subtest was created. Students received a point for each letter sound read correctly in the word and one point for each non-word read correctly.

To predict NWF, a regression model was conducted that included HLE, POE, and age,  $F(3,34) = 2.566, p = .070$ . The model trended towards significance, with an adjusted  $R^2 = .113$ , explaining 11.3% of the variance. The main effects of HLE, POE, and age were not significant, however, POE was trending towards significance, see *Table 1*.

Table 1. Predictors of English Nonsense Word Fluency (NWF) Composite

|                 | Estimate | t      | <i>p</i> |
|-----------------|----------|--------|----------|
| Intercept       | -121.049 | -1.200 | 0.239    |
| HLE             | 0.578    | 0.280  | 0.781    |
| POE             | 11.793   | 1.943  | 0.060    |
| Age (in months) | 1.371    | 1.426  | 0.163    |

### ***English Phonological Awareness***

To predict English phonological awareness, the regression model included language input/output, and an interaction of the HLE and POE. As language input/output and Grade were not significant, they were removed from the model. The final model included the interaction between HLE and POE and the model was significant,  $F(3,34) = 10.57, p < .001$ , with an adjusted  $R^2 = .437$ , with 43.7% of the variance explained (see *Table 2*). The interaction between POE and HLE was significant ( $p = .003$ ). Indicating that as the HLE and POE increase, so does phonological awareness. Results demonstrated that children with lower POE scores had a greater boost in phonological awareness skills

as HLE scores increased. The combined effect of HLE and POE's interaction is discussed further in the conclusion section. The main effects of HLE and POE were also significant.

Table 2. Predictors of English Phonological Awareness

|           | Estimate | t      | <i>p</i>  |
|-----------|----------|--------|-----------|
| Intercept | -26.436  | -0.998 | 0.325     |
| HLE       | 3.890    | 4.313  | < .001*** |
| POE       | 23.758   | 3.253  | 0.003**   |
| HLE x POE | -.713    | -3.149 | 0.003**   |

Note. \**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

### ***English Oral Language***

To predict English Oral Language, as measured by the core language composite score of the CELF-5, the regression model included language input/output, HLE, and POE. As language input/output and grade were not significant they were removed from the model. The final model included HLE and POE and the model was significant,  $F(2,35) = 18.18, p < .001$ , with an adjusted  $R^2 = .481$ . This suggests that the model explained 48.1% of the variance in English oral language skills (See *Table 3*). The main effect of HLE was a significant predictor of Oral Language ( $p = .04$ ), indicating a positive relationship between HLE and English oral language skills. As the HLE increases, or the HLE becomes “richer,” oral language skills also increase. The main effect of POE was a significant predictor of Oral Language ( $p = .002$ ); as POE increases, oral language skills increase.

Table 3. Predictors of English Oral Language

|           | Estimate | t     | <i>p</i>  |
|-----------|----------|-------|-----------|
| Intercept | 55.573   | 5.516 | < .001*** |
| HLE       | 0.810    | 2.116 | 0.042*    |
| POE       | 3.575    | 3.265 | 0.002**   |

Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

### ***Vocabulary***

To predict vocabulary, as measured using the raw score of the ROWPVT, the regression model included HLE, POE, and age,  $F(3,34) = 0.9881$ ,  $p = .410$ , with an adjusted  $R^2 = -0.001$ . The model was not significant and thus further interpretations of the relationship between these variables and vocabulary is not considered meaningful (See *Table 4*).

Table 4. Predictors of Vocabulary

|                 | Estimate | t     | <i>p</i> |
|-----------------|----------|-------|----------|
| Intercept       | 67.223   | 2.361 | 0.024*   |
| HLE             | 0.638    | 1.097 | 0.281    |
| POE             | 0.692    | 0.404 | 0.689    |
| Age (in months) | 0.092    | 0.341 | 0.736    |

Note. \* $p < .05$

### ***Post- Hoc Analyses***

#### ***Word Reading Fluency (WRF) – Real Word***

A post-hoc analysis was completed because the non-word reading fluency regression model was considered insignificant. To predict Word Reading Fluency (WRF),



the regression model included language input/output, age, HLE, and POE. As language input/output was not significant it was removed from the model (possibly due to the inclusion of more monolinguals). The final model included HLE, POE, and age and was significant,  $F(3,34) = 5.94$ ,  $p < .002$  with an adjusted  $R^2 = 0.286$ , with 28.6% of the variance explained in this model (See *Table 5*). The main effect of age was a significant predictor of WRC ( $p = .02$ ), indicating a positive association between age and words read fluency; that is, as age increases, word reading automaticity also increases. The main effect of POE was trending towards significance ( $p = .076$ ). The main effect of HLE was not significant ( $p = .105$ ) but was retained in the model as that was one of our primary variables and answered the research question at hand.

Table 5. Predictors of Word Reading Fluency (WRF)

|           | Estimate | t      | <i>p</i> |
|-----------|----------|--------|----------|
| Intercept | -115.991 | -2.730 | 0.010**  |
| HLE       | 1.44     | 1.665  | 0.105    |
| POE       | 4.684    | 2.555  | 0.076    |
| Age       | 0.922    | 2.279  | 0.029*   |

Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

### **Research Question 1.**

**Does the Home Literacy Environment and POE affect performance on inside out (phonological awareness and decoding) outcome variables in monolingual and bilingual first and second graders? How much variance is explained by the HLE and POE in these outcome variables?**

To determine the relationship between HLE and POE on inside out variables, two regression analyses were performed for each outcome variable, with HLE and POE predicting phonological awareness and decoding (NWF).

**Phonological Awareness:** Results indicate that HLE and POE were significant predictors of English phonological awareness skills,  $p < .001$ , and  $p = .003$ , respectively. With the final regression model for English phonological awareness being significant ( $p < .001$ ). The final model explained 43.7% of the variance.

**Decoding:** Results indicate that the regression model for NWF was insignificant,  $p = .070$ . The final model explained 11.3% of the variance.

## **Research Question 2.**

**Does the Home Literacy Environment and POE affect performance on outside in (language and vocabulary) outcome variables in monolingual and bilingual first and second graders? How much variance is explained by the HLE and POE in these outcome variables?**

To determine the relationship between HLE and POE on outside in variables, two regression analyses were performed for each outcome variable, with HLE and POE predicting Vocabulary and English Oral Language.

**English Oral Language:** Results indicate that HLE and POE are significant predictors of Oral Language skills,  $p = .04$  and  $p = .002$ , respectively. The final model explained 48.1% of the variance.

**Vocabulary:** Results indicate that HLE, POE and age are not significant predictors of vocabulary,  $p = .281$ ,  $p = .689$ ,  $p = .736$ , respectively. The model

itself was not significant at  $p = .410$ . The final model explained 0% of the variance.

## CHAPTER 5

### CONCLUSIONS

#### *Discussion*

This study aims to determine if the Home Literacy Environment (HLE) and Parental Occupation and Education (POE) affect performance on English language and literacy outcomes in first and second grade monolingual and bilingual students. Specifically, we examine if HLE and POE affect performance on inside out (phonological awareness and decoding) and outside in variables (oral language and vocabulary), terms coined from Whitehurst and Lonigan's (1998) research on literacy. Grouping our outcome variables by inside-out and outside-in helps us link our findings to theories of reading acquisition. Within the children in our study, HLE and POE predict oral language, which is a variable within the "outside in" category; and phonological awareness, which is a variable within the "inside out" category. Thus, both the inside out and outside in concepts are both explained by our independent variables, but not fully explained in relation to the entirety of the emergent literacy theory.

These results are consistent with Storch and Whitehurst's (2001) research which found that there is a strong relationship between outside in and inside out variables but the relationship weakens over time. Though the researchers did not use the same battery of assessments as we did to measure outside in and inside out skills, they conjecture that there is a separation of language and reading skills as children age. Through the use of structural equation modeling, they found that the path between language ability and reading ability was not statistically significant by first and second grade (Storch & Whitehurst, 2001). This research is consistent with our results, suggesting that aspects

deriving inside out and outside in categories are more highly influenced by POE and HLE in first and second graders. Further research is needed to support or refute this theoretical framework and its potential implications towards both monolingual and bilingual students.

The results of the regression analyses revealed the predictive relationship of HLE and POE on literacy and language outcomes for both monolingual and bilingual first and second grade students. Previously thought to only predict preschool children's literacy performance, our research demonstrates that the HLE and POE continue to influence oral language and phonological awareness skills through first and second grade. Our findings also add to our understanding of bilingual children's English language and literacy development. For both monolingual and bilingual children, a higher POE and a "richer" home literacy environment predict higher English phonological awareness skills and higher English oral language skills.

#### *Phonological Awareness and Oral Language*

We found that HLE and POE are highly predictive of phonological awareness skills ( $p < .001$ ); suggesting that indirect and direct components of the HLE still influence foundational English reading skills, such as phonological awareness, regardless of learning one or two languages. This may be due to the fact that our sample population included both first and second grade students, and phonological awareness skills are foundational for applied reading beyond kindergarten. Further research is warranted to determine what aspects of the HLE specifically contribute to a child's phonological awareness skills. Interestingly, children with lower POE scores (primarily our bilingual children in this study) had a bigger boost/gain in phonological awareness skills as the

HLE increased. If children already had a higher HLE value (in the 30s), growth in phonological awareness was not as drastic; suggesting that, HLE is a significant component in increasing phonological awareness scores, even with small differences in scores. This data suggests that small changes to increase the “richness” of a child’s HLE may be beneficial in increasing phonological awareness skills in first and second grade children.

Since our final sample population was small ( $N = 40$ ), we ran a t-test to determine whether POE differed between language groups. We found that the bilingual children had significantly lower POE than their monolingual peers. However, our study only contained 13 bilingual children and we predict that if the groups were matched in size and continued to be recruited from similar schools or neighborhoods, POE across the language groups would be more comparable.

We found that the main effects of the HLE and the POE were significant predictors of oral language meaning that oral language continues to be influenced by the HLE and POE through first and second grade. These findings are similar to previous literature in that oral language skills increase because of a richer HLE (e.g., Rodriguez & Tamis-LeMonda, 2011; Sénéchal & LeFevre, 2014). However, these previous research studies had specifically studied children at kindergarten entry (Rodriguez & Tamis-LeMonda, 2011) and specifically looked at growth in oral language skills (Sénéchal & LeFevre, 2014). Comparisons between this study and previous research surrounding the measurement of oral language skills should be interpreted with caution. Some studies measure oral language skills purely through expressive vocabulary alone. Though vocabulary could be considered within the scope of oral language, we decided to

separate both outside-in variables in our analyses to indicate the importance of the oral language being measured as a subset of skills in addition to vocabulary. Indeed, separating the variables indicated significantly different results within our sample population: HLE and POE predict oral language, but not vocabulary.

Though specific HLE activities were not analyzed in this study, positive associations between a richer HLE and phonological awareness skills demonstrates the “pliability” of HLE and its significant role in boosting these skills (e.g., Niklas et al., 2020). In other words, POE cannot be changed in a short time period. However, the HLE can be augmented and altered to support a child’s needs within the environment. Specific aspects of the HLE such as materials or frequency of practices such as shared book reading can be put into place to establish a better baseline for furthering literacy development. Future research should focus on what exactly in the HLE can be modified to support monolingual and bilingual English language and literacy development.

#### *Vocabulary and Decoding*

Within this group of children, HLE and POE were not predictors of vocabulary. This is not consistent with research regarding monolingual and bilingual students (e.g., Griffin & Morrison, 1997; Yeomans-Maldonado, 2021), however, these studies focused on kindergarten children. This data suggests that the HLE could be more influential to receptive vocabulary knowledge for children primarily *before* first grade. In future research, using an expressive vocabulary measure such as the Expressive One Word Picture Vocabulary Test (EOWPVT-4) or the Expressive Vocabulary Test (EVT-2) as an outcome variable, may be predicted by HLE and SES in in first and second grade students.

Given our sample population, HLE and POE were not considered significant predictors of decoding skills as the model was not significant either. In our study, we included nonsense word reading as our measure of decoding. Though our initial research question addressed decoding and the alphabetic principle, a post-hoc exploratory analysis was conducted with real word reading fluency (WRF), a subtest of the DIBELS. Results of the regression model indicated a positive relationship between HLE, POE, and age ( $p < .002$ ). Age ( $p = 0.029$ ) was considered a significant predictor of real word reading skills while HLE and POE was not. Howard et al.'s (2014) research has similar consistencies with our findings. For their model of SES predicting reading fluency skills, Howard et al. (2014) found that SES predicted English letter-word identification in bilingual kindergarteners and reading comprehension in bilingual third graders. We can say that reading is still highly influenced by HLE and POE for our sample population, which has significance as we discuss intervention and forward steps.

### ***Limitations***

One limitation in our research was within the conceptual scoring approach. For the scoring of all bilingual participants, two standard matched assessments were administered in both Spanish and English separately. Conceptual scoring was used to match English item terms that were incorrect to the corresponding Spanish terms to account for conceptual knowledge rather than word knowledge by specific language. The administration of the ROWPVT-4 in both languages followed the rules of basal and ceiling. Following the rules of basal and ceiling may have limited the total representation of vocabulary knowledge of bilingual participants. Each test contained almost all of the same items, however, not all items were considered the same difficulty level in both



languages. For example, “peludo [hairy]” is considered to be under ages 13;0 to 15;11, and “shaggy” (a synonym) is considered to be under ages 10;00 to 11;00. Because items were administered according to the test’s ceiling protocol, some items may have not been accounted for in Spanish because of varying item level difficulties between languages.

Additionally, measuring expressive vocabulary may have been a better outcome measure than receptive vocabulary. One study determined that the HLE predicted the variability of children’s vocabulary at kindergarten, but not growth (Yeomans-Maldonado, 2021). This study used receptive vocabulary as a measure of skill, suggesting that expressive language may be a more sensitive measure of HLE and POE influence on the variability of vocabulary skills in later grades.

Another limitation in our study was our sample size and language groups. For our regression analyses, our final sample size was 40 (accounting for 1 outlier), with 27 monolingual and 13 bilingual first and second grade students. In the future, having a larger sample size for each of the language groups will help to generalize findings. Though our sample size was considered small, our findings still indicate promising implications of POE and the HLE on English language and literacy outcomes in first and second grade students. Results of our study should be interpreted with caution in regards to generalization of findings to bilingual learners given that the majority of the children in this study were monolinguals, which may have skewed the results.

Additionally, due to the lack of HLE surveys specifically created for school-aged children, our HLE was modified to fit the profiles of first and second grade students. The survey was coded on a true or false (0 or 1) scale, which grossly limited the degree in which individual activities, attitudes, or materials in the home could be accounted for. For

future research, a Likert scale consisting of at least 5 to 7 values may be more appropriate for this age group so that a more nuanced analysis could be conducted to see which activities, attitudes, or materials are best at predicting language and literacy outcomes in early school-age children. An HLE checklist that not only measures the HLE in terms of frequency and quantity, but also takes into account the quality of activities in the home may be more beneficial for intervention (e.g., Inoue et al., 2020). It is also worth noting that the checklist encompasses questions that involve possession or access to computers and televisions. It should be noted that a checklist that contains more flexible statements (e.g. my child has access to technological resources that they use to read or listen to stories) might help to disambiguate SES from the HLE. Additionally, a checklist that is adapted to determine which languages bilingual children are using for activities within HLE may also be beneficial for intervention.

For the purpose of this study, all outcome variables examined English assessments only. One challenge in comparing outcome variables between English and Spanish assessments was that assessments varied in prompting items, level of difficulty, and recency of updated norms. It should be noted that the characteristics of the assessment themselves could potentially limit how we look at Spanish-English bilingual children's literacy outcomes. For example, how do we account for the influence of phonology from a child's first language on their second language when scoring the CTOPP-2? Furthermore, our bilingual participants could not read in Spanish and therefore could not complete the decoding assessments in Spanish. Ideally, a more varied and representative sample population of bilingual children would contribute further to conclusions surrounding our findings. Participants in our sample population attended the same school

and lived in the same town which can help us to rule out additional factors that could be present in a more non-controlled environment with children attending different schools located in different communities.

It should be noted that traditional literacy in the United States includes the ability to read and write. Across cultures, home literacy practices may be more distinct than school practices alone, encompassing cultural values embedded in literary routines. Other activities that are taking place in the home can additionally contribute to a child's language and literacy competencies. For example, Reese (2012) found that oral storytelling was associated with aspects of Mexican bilingual children's oral language skills in first through third grade. The diversity of home literacy activities is recognized and the HLE checklist is not a comprehensive means to measure every activity within the home.

### ***Future Directions and Possible Clinical Implications***

Findings from our study are a step in a positive direction to increase understanding on how the home literacy environment impacts language and literacy. This may lead to interventions in the home setting to support English literacy skills of first and second graders from a variety of language backgrounds. Bilingualism is an asset to language and literacy development, and should be encouraged in both the home and school. Future research should look at the home literacy environment in terms of specific attitudes, activities, and materials (Niklas et al., 2020), to determine what resources should be augmented to support phonological awareness and oral language skills. If specific activities and materials would be most beneficial to see improvements in academic outcomes (such as direct teaching of sound relationships), this can lead to

intervention studies and future recommendations to speech-language pathologists and teachers to augment home language and literacy practices. Scaffolding of supports and modifications may also be beneficial for kids with low POE. However, we should not assume what an HLE is for a child without collaboration with the parents and evaluation. Intervention must first look at what is already happening within the home, and how we can augment literacy. Furthermore, our research revealed that educators and schools must learn about existing home literacy practices and identify areas in which they could also learn from the parents. The home literacy environment and literacy outcomes must be a collaborative, culturally preserving intervention.

#### *Rhode Island Right to Read Act*

The Rhode Island Right to Read Act was enacted in 2019 to ensure that the instruction of reading within classrooms was based upon the newest scientific evidence. Supported by professional development seminars and programs, teachers in Rhode Island must adhere to state standards requiring “proficiency in or awareness of the knowledge and practices of the Science of Reading and Structured Literacy” (*The Rhode Island Right to Read Act*). With educators being trained in the science of reading in Rhode Island, better instruction for the home environment can be transferred. Suggesting the integration of the science of reading within the schools and transferring it into home practice may have beneficial effects to augment student’s literary competencies.

#### *Multimodal Learning for Bilingual Learners*

Through our findings, we know that the HLE and POE continue to affect student’s language and literacy outcomes beyond kindergarten. Because print-based literacy is not the only way to expand literacy proficiency, especially for multilingual learners, there is

an emphasis on providing additional opportunities for multilingual experiences through multimodal home literacy practices (Turner et al., 2022). Turner et al. (2022) studied how home language and literacy practices can be supported by teachers in the classroom. Their study included 9-14 year old children who participated in multimodal instruction. Findings indicated that parents could be included to bridge the school-family community partnership. The findings are relevant to our study because they emphasize the importance of familial involvement and communication between home and school to improve literacy skills in Spanish-English bilingual students. Future research should expand upon Turner et al.'s (2022) research regarding Spanish-English bilingual children and ways in which multimodal literacy engagement can augment home literacy instruction while preserving the language and cultural values celebrated at home.

Figure 1. Home Literacy Environment Checklist

# Get Ready to Read!

www.GetReadytoRead.org

## Home Literacy Environment Checklist

### Is your home literacy-friendly?

You are your child's first teacher. Your home is where your child will get his or her first experiences with books and reading.

Look around your home and think about what you do with your child. If the statement on the checklist is true, place a check in the "true" column. If the statement is false, place a check in the "false" column. When you are finished, count up the number of checks in the true column and find that number on the chart at the end of the checklist. Use the results as a guideline to see what you can do for your child.

#### What my child has...

|  | TRUE                     | FALSE                    |
|--|--------------------------|--------------------------|
| My child has at least one alphabet book (e.g., Dr. Seuss's <i>ABC</i> book).   | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has magnetized alphabet letters to play with.   | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has crayons and pencils readily available for writing and drawing.  | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has paper readily available for writing and drawing.  | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has a table or surface readily available for writing or drawing.  | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has at least one rhyme book (e.g., Joseph Slate's <i>Miss Bindergarten Gets Ready for Kindergarten</i> ).             | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has more than one rhyme book.   | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has at least 10 picture books.  | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has at least 20 picture books.  | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has at least 50 picture books.  | <input type="checkbox"/> | <input type="checkbox"/> |
| My child plays beginning reading and alphabet games on a computer (e.g., <i>Reader Rabbit</i> or <i>Bailey's Book House</i> ). | <input type="checkbox"/> | <input type="checkbox"/> |
| My child has materials and games to help learn the alphabet.   | <input type="checkbox"/> | <input type="checkbox"/> |

#### What I or another adult do...

|   | TRUE                     | FALSE                    |
|---|--------------------------|--------------------------|
| I or another adult in the house read a picture book with my child at least once a week.   | <input type="checkbox"/> | <input type="checkbox"/> |
| I or another adult in the house read a picture book with my child at least four times a week.   | <input type="checkbox"/> | <input type="checkbox"/> |
| I or another adult in the house teach new words to my child at least once a week.   | <input type="checkbox"/> | <input type="checkbox"/> |
| I or another adult in the house teach new words to my child nearly every day.   | <input type="checkbox"/> | <input type="checkbox"/> |
| I or another adult in the house have a detailed and informative conversation with my child at least once a week. (e.g., "How do you think ice cream is made?"). | <input type="checkbox"/> | <input type="checkbox"/> |
| I or another adult in the house have a detailed and informative conversation with my child nearly every day.  | <input type="checkbox"/> | <input type="checkbox"/> |
| I or another adult in the house help my child learn nursery rhymes.   | <input type="checkbox"/> | <input type="checkbox"/> |
| I or another adult in the house encourage my child to tell me what he or she wants using complete sentences.  | <input type="checkbox"/> | <input type="checkbox"/> |
| I or another adult in the house take my child to the library or a bookstore at least once every two months.   | <input type="checkbox"/> | <input type="checkbox"/> |

#### What my child sees me or another adult doing...

|  | TRUE                     | FALSE                    |
|--|--------------------------|--------------------------|
| My child sees me or another adult in the house reading books, magazines or the newspaper at least once a week. | <input type="checkbox"/> | <input type="checkbox"/> |
| My child sees me or another adult in the house reading books, magazines or the newspaper nearly every day.     | <input type="checkbox"/> | <input type="checkbox"/> |

**What I am...**

**TRUE FALSE**

- I am a good reader.
- I have a large vocabulary.
- I began to read picture books with my child before he or she was a year old.
- I enjoy reading picture books with my child.
- I expect that my child will work to his or her potential in school.


**Now or in the past, I or another adult encourage or help my child...**

**TRUE FALSE**

- I or another adult in the house encourage my child to watch beginning reading shows on TV or tapes (e.g., *Between the Lions* on PBS).
- I or another adult in the house encourage my child to play with computer games that introduce the alphabet and beginning reading (e.g., *Reader Rabbit*).
- I or another adult in the house help my child learn to sing or say the alphabet.
- I or another adult in the house help my child learn to name letters of the alphabet.
- I or another adult in the house help my child learn to write letters of the alphabet.
- I or another adult in the house help my child learn to write his or her name.
- I or another adult in the house help my child learn to write other people's names.
- I or another adult in the house help my child learn how to rhyme.
- I or another adult in the house help my child learn the sounds that letters of the alphabet make (e.g., "M makes the mmmm sound").

**Count up the number of statements marked TRUE and put that number in the box to the right. See the chart below to find out how literacy-friendly your family child care program is.**

- 30 - 37** Home literacy environment has most of the necessary supportive elements
- 20 - 29** Home literacy environment has many supportive elements
- 11 - 19** Home literacy environment has some supportive elements
- 0 - 10** Home literacy environment needs improvement

 Get Ready to Read! is a project of the National Center for Learning Disabilities. For more information about this program please visit our Web site [www.GetReadytoRead.org](http://www.GetReadytoRead.org).

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