

EXAMINING THE EFFECTS OF A PEER-MEDIATED ACADEMIC
INTERVENTION ON THE LANGUAGE AND LITERACY PERFORMANCE OF
EMERGENT BILINGUAL
STUDENTS

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STUDENTS

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ABSTRACT

About 5 million Emergent Bilingual (EB) students are enrolled in public elementary and secondary schools across the United States. Spanish-speaking EBs constituted 76% of the EB population in the U.S. educational system (Office of English Language Acquisition, 2019). Although not all EBs are at risk for falling behind grade level proficiency in literacy, examination of the National Assessment of Educational Progress (NAEP) reveals that EBs, on average, demonstrate significantly lower levels of literacy proficiency than their non-EB peers in Grades 4 and 8 (McFarland et al., 2018). Schools support the literacy development of Spanish-speaking EBs through multitiered systems of support (MTSS), which encourages early identification and intervention for those students needing support. A fundamental aspect of MTSS is Tier 1, which consists of high-quality core instruction and universal screening of all children in general education classrooms. Despite the school policies and practices to close or reduce the academic opportunity gap for EBs by implementing MTSS, it has not fulfilled its promise for Spanish-speaking EBs. One aspect is that few programs do not address EB's home language as well as English language development and provide culturally and linguistically responsive instruction. This dissertation aims to examine the effects of an abbreviated peer-

mediated academic intervention on literacy and language performance among 64 Spanish-Speaking EB students in a rural school district and to further examine the extent to which home language exposure affects literacy outcomes. A randomized cluster design was used to examine the effects of an abbreviated peer-mediated literacy intervention. Hierarchical linear regression analysis was used to examine the effect of home language exposure on literacy measures. Results indicated the treatment condition outperformed students in the control condition in Spanish oral reading fluency, bilingual receptive vocabulary, and English reading comprehension measures. Home language exposure did not affect literacy measures. This study addresses an important gap in the literature on providing abbreviated peer-mediated academic interventions for emergent bilingual students.

CHAPTER 1

INTRODUCTION

Background

Over 5 million students in United States public schools speak a first language other than English, which continues to increase yearly (National Center for Education Statistics [NCES], 2020). The terminology used to describe these children has shifted from the more deficit-oriented term English language learners (ELL) and English learners (EL) to the more strength-based term Emergent Bilinguals. Emergent bilinguals (EB) are children developing their bilingualism by learning English while continuing to develop their first or home language (García, 2009). The expectation is that by 2025, as many as one in four children enrolled in U.S. public schools will be EB (National Clearinghouse for English Language Acquisition [NCELA], 2007). The growing numbers of EBs is not limited to urban areas, as there has been a growth of EBs in less populated rural areas, too (NCES, 2020).

Although there are over 400 languages among EBs, Spanish speakers continue to be the largest and fastest growing, representing 75% of the total population of EBs (NCES, 2019). It is critical to recognize that there is significant heterogeneity among EB students in terms of native language (L1) and English (L2) proficiency, socioeconomic status (SES), immigration status, previous schooling histories, and sociocultural backgrounds (Ortiz & Robertson., 2018). Even though EBs are a diverse student population, they are more likely to be underserved by educational systems and have lower academic achievement than native English-speaking children (Chaparro et al., 2021). EB students in the fourth grade scored 33 points lower on the National Assessment of Educational Progress (NAEP) in reading than their English-speaking peers (NAEP, 2020). A similar pattern is observed on the 8th- and 12th-grade reading

tests and these data have not changed significantly in the previous 10 years in any state (NAEP, 2020).

Statement of the Problem

Within the U.S. educational system, school policies, and practices have tried to close or reduce the academic opportunity gap for EBs by implementing evidence-based reading interventions. However, evidence-based reading interventions tend to be applied with a “one-size-fits-all” mentality ignoring the cultural and linguistic background of EBs (Orosco & Klingner, 2010), which has resulted in large, persistent opportunity gaps in standardized test performance compared to their native English-speaking peers (Lesaux et al., 2014; Rojas et al., 2019; Sullivan, 2011). Low academic achievement is a crucial factor that leads to special education identification (Barrio, 2017; Sullivan, 2011) and a majority of EBs are frequently referred for having reading difficulties (Klingner et al., 2006). As many as 77% of EBs are identified as having a specific learning disability (SLD) in reading might be misclassified (Ortiz et al., 2011). Many factors contribute to inaccurate identification of EBs, including a lack of effective intervention, interrupted education, inadequate assessments, and inappropriate referrals, and some may have disabilities other than LD (e.g., other health impairments or speech or language) (Abedi, 2014; Ortiz et al., 2011). It is critical to make instruction comprehensible for EBs to reduce inappropriate education that may lead to inappropriate referrals (Echevarria et al., 2011; Hibel et al., 2010; Sullivan, 2011) and high school dropout (Hernandez et al., 2013; Orosco & Klingner, 2010).

Within the multi-tiered systems of support (MTSS) framework, Tier 1 is the primary level of prevention, and it represents core classroom instruction delivered to all students in general education (Fuchs & Fuchs, 2006). Effective core reading

instruction includes explicit instruction on phonological awareness, phonics, reading fluency, reading comprehension, and vocabulary (National Reading Panel, 2000). Additionally, effective core reading instruction must use culturally and linguistically responsive practices (CLRP) to promote academic achievement for student populations who have been historically marginalized, thereby working towards social justice practices (Banks, 2009; Hernandez et al., 2013). A critical aspect of CLRP includes intentionality and meaningful relationships by integrating student identities and linguistic supports into instructional practices (Gay, 2002; Goldenberg, 2013). Within CLRP, interventions consider the unique learning characteristics of EB students by incorporating race and ethnicity, English language proficiency, acculturation status, home and community culture, and student's past educational experiences (Gay, 2002; Lucas & Villegas, 2013). Therefore, evidence-based reading interventions must be able to affirm the cultural, linguistic, and sociocultural backgrounds of EB students to encourage reading success.

A limited but expanding body of instructional approaches are available to help educators build on the cultural and linguistic backgrounds of EB students, especially those with reading difficulties. Peer-mediated academic interventions (PMAIs) refers to an instructional approach that centers student-student collaboration and provides an alternative to teacher-directed or individualized learning (Cohen et al., 1982). PMAIs provides EBs with frequent opportunities to acquire academic language and content learning (Cole, 2013; Heron et al., 2006). Several studies have demonstrated the effectiveness of PMAIs for EB students (Cole, 2013; Pyle et al., 2017).

Peer-Assisted Learning Strategies (PALS; Fuchs et al., 1997) is one of the most frequently studied peer-mediated instructional approach. PALS focuses on reading fluency and comprehension in second through sixth grades by pairing high-

performing and low-performing readers to work on a series of activities (Fuchs et al., 1997). These activities include partner reading, paragraph shrinking, and prediction relay (Fuchs et al., 1997). Additionally, PALS incorporates frequent verbal interactions between students, increasing students' opportunities to respond (McMaster et al., 2006). PALS has led to positive reading outcomes for EB students with and without disabilities (Calhoun et al., 2007; Fuchs et al., 1997; McMaster et al., 2008; Sáenz et al., 2005).

While PALS has proven to be effective as a classwide intervention for increasing EB student's reading achievement (McMaster et al., 2008; Sáenz et al., 2005). PALS is usually implemented within 15 to 22 weeks, an extensive length of instructional time given the shortage of time educators have in schools (Maki et al., 2021). In addition, many teachers have insufficient opportunity for on-site assistance and training to become proficient in using PALS (Burns et al., 2016), especially to accommodate the diverse instructional needs of EB students. Thus, there is need for research examining shortened classwide PMAIs.

Purpose of the Current Study

Given the persistent underachievement of many EBs, peer-mediated academic interventions could be a promising practice to improve the reading outcomes for EBs. This study aims to evaluate an abbreviated PMAI in reading with emergent bilingual students and their native English-speaking peers. A classwide peer mediated reading intervention might reduce the number of EB students as needing additional intensive interventions, which may help reduce inappropriate referrals. Thus, the study answered the following research questions:

Research Questions:

1. What is the effect of the peer-mediated reading intervention on the English oral reading fluency of EB students in Grade 2 to 5?
2. What is the effect of the peer-mediated reading intervention on the Spanish oral reading fluency of EB students in Grade 2 to 5?
3. What is the effect of the peer-mediated reading intervention on the Bilingual receptive vocabulary skills of EB students in Grade 2 to 5?
4. What is the effect of the peer-mediated reading intervention on the reading comprehension skills of EB students in Grade 2 to 5?
5. To what extent does home language exposure affect the English and Spanish reading outcomes associated with the peer-mediated reading intervention for EB students in Grades 2 to 5?

Definition of Key Terms

Emergent Bilinguals (EBs): is a term that is used to refer to what educators call English Learners (ELs). ELs are children who are exposed to a language in addition to English. The term “English Learner” is widely accepted and understood; however, it fails to highlight these children are in the process of becoming bilingual (García & Kleifgen, 2010). To honor the benefits of bilingualism, it is important to choose terminology that does not follow a deficit model.

Peer-Mediated Academic Interventions (PMAIs): A variety of strategies in which students are responsible to deliver academic instruction to other students in an organized and structured manner (Cushing & Kennedy, 1997).

Classwide Peer Tutoring (CWPT): is one approach to peer-mediated academic interventions, in which students in a class are paired to work together (Greenwood et al., 1989).

CWPT allows students to serve both as tutor and tutee. Students work with a peer who are trained and supervised by the classroom teacher (Delquadri et al., 1986; Maheady & Gard, 2010).

Culturally and Linguistically Responsive Practices (CLRP): is an educational approach that builds on students' cultural and linguistic backgrounds to provide instruction that is responsive to the needs of students (Gay, 2010; Lucas & Villegas, 2013; Zhang-Wu, 2017).

Reading Comprehension: a cognitive process of making meaning from texts (Woolley & Woolley, 2011).

Oral Reading Fluency: is a critical trait of a skilled reader (Hasbrouch & Tindal, 1992). Oral Reading fluency is a student's ability to simultaneously decode and comprehend text with accuracy, automaticity, and prosody (Torgesen & Hudson, 2006).

Receptive Vocabulary: the ability to comprehend words when reading text or listening to the text (Becker, 1977).

Assumptions

There are several assumptions regarding this study. First, it is assumed that the sample of teachers and students will be representative of the greater population. Second, the study assumes the measures will accurately represent the literacy performance of EB students to show significant gains. Third, the study assumes that the World Class Instructional Design and Assessment (WIDA) measure, Assessing Comprehension and Communication in English State-to-State (ACCESS, 2018) for EBs, validly indicates English language proficiency. Fourth, it is assumed that native English-speaking students who will partner with EB students will have adequate English language proficiency. Fifth, it is assumed that teachers will perceive the

abbreviated PMAI as an acceptable intervention and will be able to implement it with fidelity.

Limitations

There are several limitations regarding the current study. First, Spanish-English bilingual assessments have been developed, which limits the bilingual assessments to only Spanish-speaking students. Second, the home language exposure survey might not accurately represent home language exposure. Third, the study implemented an active control condition. Fourth, the study did not evaluate the core instruction provided by the general education teachers. Finally, the small number of EB students who participated in the study.

Delimitations

For this study, three delimitations predetermine the boundaries and limit the current study. First, only Spanish-speaking students will be given bilingual assessments, which limits the generalizability of the study to other non-Spanish-speaking students. Second, the intervention will use a specific strategy, limiting the study's generalizability to other PMAI approaches. A third delimitation is that only 2nd to 5th-grade students were participants, which limits the results to elementary school.

Organization of the Dissertation

This dissertation includes five chapters that outline the study. Chapter 2 is a literature review of reading skills for EB students, relevant research regarding EB students, peer-mediated academic interventions, and theoretical underpinnings. Chapter 3 discusses the participants, measures, procedure, and data analysis. Chapter 4 describes the results. Chapter 5 includes the discussion, which highlights the importance of the study.

CHAPTER II

LITERATURE REVIEW

Chapter 2 reviews various literature relevant to the proposed study's purpose. First, literature addressing the Multitiered Systems of Support for emerging bilinguals (EBs). Second, research regarding reading skills for EBs. Third, effective instructional approaches when working with EBs and factors that influence EB students' reading achievement. Finally, existing peer-mediated academic interventions, and areas for further development to provide the rationale for the present study of evaluating an abbreviated peer-mediated academic intervention for EBs.

Multitiered System Support and EBs

To prevent disproportionate representation of EBs in special education, many states and school districts have started implementing Multitiered System of Support (MTSS) (Linan-Thompson & Ortiz, 2009). MTSS frameworks include: (a) school-wide plans, (b) universal screeners to determine performance levels for all students, (c) data-based decision making, and (d) continuous progress monitoring (Harris & Sullivan, 2017; Pullen et al., 2018). MTSS is predicated on student access to evidence-based practices delivered in core instruction and differentiated instruction for students who are displaying academic difficulties and providing specialized instruction for students with disabilities (Fuchs & Fuchs, 2006, Hoover & Soltero-González, 2018). As schools and teachers continue to work towards better serving EBs, research on the effectiveness of these frameworks in improving the academic outcomes and reducing inappropriate special education referrals is limited. Yet, examining achievement data (e.g., graduation rates, retention rates, performance on standardized assessments) suggests that EBs continue to underperform compared to

their monolingual peers (NCES, 2019). Further research is needed to explore the effectiveness of these frameworks and identify best practices for serving EBs.

Identifying the needs of EBs can be a complex process, teachers and school professionals may not feel prepared to instruct EBs (Heineke & Giatsou, 2020; López & Santibañez, 2018), and have difficulty distinguishing between the second language development and disability (Golloher et al., 2018; Shifrer et al., 2011; Swanson et al., 2020). A lack of understanding of second language development and disability can lead to inappropriate identification for special education services, particularly for EBs who exhibit low language proficiency (Shifrer et al., 2011; Sullivan, 2011; Swanson et al., 2020). As EBs advance through grade levels, language support services decrease causing teachers to seek additional support from special education services, thus increasing the rates of identification for EBs (Sullivan, 2011).

EBs may experience over or underrepresentation in special education depending on the school, district, or state they are located in. For instance, Morgan et al., (2015) found that EBs are underrepresented in special education compared to their peers from homes where English is the primary language, while other data suggests EBs to be overrepresented in certain disability categories (e.g., specific learning disabilities and speech and language impairments) (Ortogero & Ray, 2021; Sullivan, 2011). Regardless of whether EBs are over or underrepresented in special education, it is important to address these disparities. Inappropriate placement in special education or not properly identified can result in students not receiving the appropriate instruction and support they need to succeed academically. For MTSS to meet the goal of providing appropriate educational access for EBs, educators must evaluate whether each of the essential components of MTSS represents culturally and linguistically responsive and evidence-based practices for EBs. This includes ensuring

that interventions and support services are validated as evidence-based and effective for EBs (Whitenack & Golloher, 2017).

Culturally and Linguistically Responsive Practice (CLRP)

Culturally and linguistically responsive practice (CLRP) is an approach to address the educational inequity faced by many EBs by providing equitable instruction (Klingner et al., 2014; Lucas & Villegas, 2013). CLRP emphasizes the importance of incorporating student identities, cultural and linguistic characteristics, experiences, and perspectives into instruction to make it more equitable (Gay, 2002; Lucas & Villegas, 2013). Effective educators integrate CLRP in all aspects of their instruction, including incorporating linguistic supports and effective strategies to make content accessible and promote academic achievement for EBs (Linan-Thompson et al., 2018). By integrating students' cultural and linguistic backgrounds into instruction, educators can help EBs better connect with and understand the academic content.

A few studies have examined the impact of CLRP on EBs students' academic achievement (Aceves & Orosco, 2014; Linan-Thompson et al., 2018). For instance, Orosco and O'Connor (2014) found that effective reading practices that contains CLRP, such as linguistic supports and students' background knowledge, resulted in improved reading comprehension and oral language development for EBs in special education classrooms. Promoting instructional practices that encourage equitable outcomes is especially critical in reading, where EBs perform consistently lower on standardized achievement measures than their native English-speaking peers (NCES, 2019).

Effective Instructional Practices for EB students

Research on effective teaching for EBs highlights the importance of addressing academic language through direct and systematic instruction of the English language (August & Shanahan, 2017; Baker et al., 2016; Gersten & Baker, 2000). Gersten and Baker (2000) indicated that effective instruction for EBs include using vocabulary across multiple subject areas, implementing graphic organizers to reinforce academic concept, using peer strategies to enhance engagement and opportunities to respond of newly acquired skill, purposefully using the native language, and moderating cognitive and language burdens (Gersten & Baker, 2000). Additionally, Klingner and colleagues (2006) found eight studies that met their criteria for effective instructional approaches for EB students in reading. These practices include combining phonological awareness with English language development activities, helping students acquire reading foundations in both their native language and English, incorporating the use of reading comprehension strategies in both languages, and emphasizing rich vocabulary instruction (Klingner et al., 2006). Overall, findings from both syntheses provide a strong emphasis in vocabulary instruction and native language support.

Several meta-analyses and systematic reviews have examined the effects of reading interventions for EBs (Cho et al., 2021; Ludwig et al., 2019; Richards-Tutor et al., 2016; Snyder et al., 2017). Richards-Tutor et al. (2016) reviewed 12 experimental studies from 2000 to 2012 and found that interventions targeting beginning reading skills had significant moderate to large effect sizes ($ES = 0.58$ to 0.91), as did interventions focused on reading or listening comprehension ($ES = 0.47$ to 2.34). Effective reading interventions EBs included explicit instruction such as modeling, scaffolding, and corrective feedback (Richards-Tutor et al., 2016). Snyder et al. (2017) examined studies between 2003 and 2015 and found that reading

interventions with EBs led to large effect sizes (ES = 0.14 to 0.26) and emphasized the importance of phonemic awareness, phonics, fluency, and comprehension, as well as the importance of vocabulary instruction for EBs (Snyder et al., 2017).

Ludwig et al. (2019) examined 26 studies on the effects of reading interventions for EBs and found large effect sizes on reading accuracy (ES = 1.22) and reading fluency (ES = 0.80), and a moderate effect size on reading comprehension (ES = 0.50). More recently, Cho et al. (2021) examined studies between 2008 to 2018 and found a medium effect size (ES = 0.65) for interventions targeting basic reading skills for EBs, and interventions that activated background knowledge, clarified vocabulary meaning, and used visuals and gestures for understanding reading improved reading skills for EBs. It is important for educators to use evidence-based practices and individualized instruction to support all learners, especially EBs, in their academic growth.

The use of MTSS can be particularly effective in providing early intervention for EBs. MTSS emphasizes the use of evidence-based practices and individualized instruction to support all students (Gersten et al., 2009). Tier 1 involves high-quality core instruction delivered to all students in the general education settings, but if students do not demonstrate adequate growth, they are provided with additional support of greater intensity, frequency, or individualization (Greenwood et al., 2015). Tier 2 provides supplemental instruction often in small groups, while Tier 3 is more intensive and often individualized intervention (Gersten et al., 2009). For EBs, it is important to provide differentiated, supplemental vocabulary instruction, explicit instruction such as modeling, scaffolding, and corrective feedback to reduce the risk of language and literacy delays (Goldstein et al., 2016; Li et al., 2017). By

implementing MTSS, educators can provide effective support for EBs and help them succeed academically (Li et al., 2017).

Reading Skills of EB students

The National Literacy Panel (NLP) has identified specific skills that EB students need to become proficient readers including phonological awareness, phonics, fluency, vocabulary, and text comprehension (August et al., 2009). However, accommodations should be made to ensure that EBs can benefit from the English literacy instruction (August et al., 2009). Regardless of children's primary language, all children must learn these essential reading skills for reading success (Geva & Yaghoub-Zadeh, 2006; Vaughn et al., 2005). For teachers working with EB students, it is important to recognize that the pronunciation of English and other phonetic languages is not the same, which may introduce differences in students' learning English (Goldenberg, 2020).

Learning to read in English can be particularly challenging for EBs because they are expected to learn academic content while simultaneously acquiring English language proficiency (Denton et al., 2008). It can take up to 10 years or more for EBs to acquire English proficiency (Thomas & Collier, 1997). Even after proficiency is achieved, EBs may struggle to acquire academic language and vocabulary knowledge required to understand content areas and literacy (August & Shanahan, 2017). This challenge only increases as students' progress through grades, where the expectation shifts from "learning to read" to "reading to learn" (Chall et al., 1990). It is crucial to provide targeted support and accommodations to EBs to ensure their academic success.

Oral Reading Fluency

The development of oral reading fluency (ORF) is a crucial factor in predicting overall reading ability (Baker et al., 2008; Fuchs et al., 2001). When individuals are able to read connected text fluently and accurately, they can dedicate cognitive resources to comprehension of the text (Fuchs et al., 2001). This suggests that individuals who have a difficult time reading fluently will spend most of their attentional resources on decoding and reading fluently, leaving few resources to concentrate on comprehension (LaBerge & Samuels, 1974). Research has identified student's on-going problems with reading fluency despite correct decoding ability.

ORF is a commonly utilized curriculum-based measurement by schools to make decisions about whether students are making adequate progress or if they require more intensive instruction (Kilgus et al., 2014). ORF scores in a student's native language (L1) are strongly correlated with ORF scores in their second language (L2) (Domínguez de Ramírez & Shapiro, 2007). However, research investigating the use of ORF as a screening tool for EBs is still being evaluated. Research suggests that growth on ORF scores over time is strongly related to language proficiency, and that ORF growth for EBs in L2 is generally slower compared to growth from monolingual English-speaking peers (Gutierrez & Vanderwood, 2013; Keller-Margulis et al., 2012). Newell et al. (2020) evaluated the validity of ORF as a screening tool across 31 studies for EBs. Results indicated that correlations of ORF measures are generally higher in early grades (e.g., third grade, $r = 0.75$; Baker, 2007) than in upper elementary grades (e.g., 5th grade, $r = 0.44$; Crosson & Lesaux, 2010). Correlations between ORF scores and reading comprehension scores ranged from $r = 0.58$ to 0.82 (Newell et al., 2020). Furthermore, ORF was identified as an important factor in assessing reading ability, but with some caution when using it as a L2 reading screener with EBs (Newell et al., 2020).

Over the past 25 years several studies have shown repeated reading and passage previewing to be effective strategies to improve students' reading fluency (Skinner et al., 1997; Therrien, 2004). Repeated reading involves students reading multiple times a grade-level text to reach a level of accuracy (Therrien & Kubina, 2006), which has been shown to increase reading fluency for students (Lee & Yoon, 2017; O'Keefe et al., 2012). In repeated reading, students are exposed to new words in a variety of sentences (Chard et al., 2009), allowing for rehearsal of the words (Musti-Rao et al., 2009). Error correction, where an interventionist provides correct pronunciation for any word a student reads incorrectly (Kim et al., 2017), also supports reading new words. Repeated reading has been shown to increase word recognition and vocabulary by providing readers repeated practice (Marchand-Martella et al., 2013).

There are three general kinds of passage previewing interventions, including silent passage preview, oral passage preview, and listening passage preview. Listening passage previews has received the most research support over the other two types of passage previews strategies (Begeny et al., 2009), in which students listen to a more skilled reader read a passage aloud while following along silently (Begeny et al., 2009).

Stevens and colleagues (2017) examined the effects of reading interventions for students with learning disabilities in kindergarten through fifth grade on the reading fluency and reading comprehension outcomes. Findings from the 19 studies showed that repeated reading improved reading fluency in students with learning disabilities. Similarly, 34 studies examining the use of repeated reading on reading fluency for students with reading difficulties revealed positive effects on the reading fluency gains for students with reading difficulties in elementary ($g = 0.86$; Lee &

Yoon, 2017). Furthermore, repeated reading intervention is more effective when combined with listening passage preview ($g = 1.95$) compared with repeated reading intervention without the listening passage preview ($g = 0.94$). This combination was found to have positive effects for students with reading difficulties students in elementary grades (Lee & Yoon, 2017).

Vocabulary

Vocabulary acquisition is crucial for reading, writing, and language comprehension (Helman & Burns, 2008). Vocabulary development is especially true for EBs, who often struggle with building their English vocabulary (Helman & Burns, 2008). Vocabulary knowledge in both first and second languages is critical for later English reading comprehension (Kieffer & Lesaux, 2012; Levag & Aukrust, 2010; Proctor et al., 2006). In a longitudinal study following 141 children from first to sixth grade, EBs had significantly lower initial English vocabulary than native English speakers, and the gap continued over 6 years of EBs receiving English instruction (Farnia & Geva, 2011), perhaps because of a limited amount of time devoted to systematic and explicit vocabulary instruction in schools (Cena et al., 2013). Vocabulary instruction is the least taught reading component in classrooms, but students who are provided vocabulary instruction have larger gains in vocabulary compared to students in classrooms with lower vocabulary instruction (Baker et al., 2016).

English vocabulary size and vocabulary knowledge in the first language are both important factors for later reading achievement (Grimm et al., 2018; Mesa & Yeomans-Maldonado, 2019). For example, bilingual students with high Spanish receptive vocabulary knowledge significantly outperformed bilingual students with low Spanish receptive vocabulary knowledge in reading (Baker et al., 2021) and

Spanish receptive vocabulary among 80 Spanish-speaking EBs was positively related to the development of English vocabulary and second-grade reading comprehension (Kelley et al., 2015). Thus, incorporating vocabulary instruction into reading interventions can improve reading fluency and comprehension for EBs (Tam et al., 2006). Given these findings, it is important to prioritize effective vocabulary instruction strategies for EBs.

Language Proficiency

The identification of EB children is a critical responsibility of schools in the United States (Gándara et al., 2004). In *Lau v. Nichols* (1974), the United States Supreme Court interpreted Title VI of the Civil Rights Act to affirm the right of language minority children to an education equal to that of their English-speaking peers (Gándara et al., 2004). Thus, schools are required to identify and determine appropriate instruction for EB students, which typically begins with a home language survey provided to parents or caregivers (Bailey & Kelly, 2013). If parents or caregivers indicate that the child comes from a household that uses a language other than English, students are assessed with an English language proficiency (ELP) exam that assesses skills in the areas of reading, writing, listening, and speaking (Wolf, 2020). However, there is a large discrepancy between states and school districts on how EBs are identified (Artiles & Ortiz, 2002). ELP assessments are one of the primary measures available to school teams evaluating the characteristics of EBs (Albers et al., 2009; Bailey & Huang, 2011). School teams should examine ELP levels and ORF scores to make accurate decisions about EB students who may need additional support (Marrs et al., 2021).

Although ELP assessments are the standard way to identify EBs, researchers have identified several limitations. There's a misconception that native language

proficiency assessments commonly administered to EBs to determine their native language proficiency provides educators with a clear picture of linguistic proficiency (MacSwan & Rolstad, 2006). English oral proficiency is a critical factor for the acquisition of English reading development for bilingual students (Fitzgerald et al., 2015; Kieffer, 2008) because it predicted English reading skills among Spanish-speaking EB students in third grade (Swanson et al., 2008) and English language proficiency in kindergarten predicted later reading achievement in third through eighth grades (Kieffer, 2012).

Regardless of language proficiency, schools can begin implementing reading interventions for EB students and should not wait until adequate English language proficiency (Ludwig et al., 2019; Wade-Woolley & Geva, 2000). Longitudinal research in which 296 at-risk EBs and monolingual English-speaking peers were provided a small-group secondary instruction in phonological awareness found that limited English proficiency did not hinder reading development (Lesaux & Siegel, 2003). Moreover, EBs who were at-risk for reading failure in kindergarten caught up to or exceeded their monolingual English peers (Lesaux & Siegal, 2003). Subsequent research found that providing systematic and explicit reading interventions was effective for all students regardless of their primary language (Lovett et al., 2008), and EBs with the lowest English language proficiency scores demonstrated the highest reading gains ($ES = 0.54$; Burns et al., 2017). Therefore, it is important to prioritize early intervention and effective reading strategies for EBs, rather than wait until EBs have adequate English language proficiency.

Home Language Exposure

Emergent bilingual learners show considerable variability in their acquisition of English, dependent on variation in their social contexts, such as the amount of

language input at home. A study using a nationally representative data set found that 34% of Latinx children live in homes characterized primarily by Spanish use with some English, 22% live in homes that use only English, and 19% live in homes that use only Spanish (Barrueco et al., 2007). In fact, many young children acquire skills in both languages prior to school entry (Castro et al., 2011). Home language exposure (i.e., what children hear) and use (i.e., what children produce) among EBs from Spanish-speaking homes consistently supported language acquisition in that language (Hoff, 2018; Mancilla-Martinez & Lesaux, 2011).

Children's English vocabulary was positively associated with the amount of English spoken by family members (Qurioz et al., 2010). Parents' self-reported home language preference for speaking English at home predicted their child's English expressive vocabulary skills in fifth grade (Duursma et al., 2007). Longitudinal research that examined the association between home language usage and vocabulary development among 180 Spanish-speaking children followed from ages 4.5 to 12 years found that children whose parents reported spoke mostly English at home demonstrated higher English expressive vocabulary skills compared to those with parents who reported speaking mostly Spanish or both languages at home (Mancilla-Martinez & Lesaux, 2011). Palermo et al. (2017) found that home English language usage among 107 Spanish-speaking preschoolers was positively associated with children's English receptive skills ($ES = 0.37$) and English expressive vocabulary ($ES = 0.30$). Although there is a positive association between children's Spanish and English oral language proficiencies in Spanish-dominant homes, there was a negative or no significant association in English-dominant homes (Cha & Goldenberg, 2015). These findings highlight the importance of language dominance in the home and how it may impact children's language development, particularly for bilingual children.

Language Exposure from Peers

Classrooms provide an excellent setting for enhancing EB student's English abilities because the exposure to an English-language learning environment (Lindholm-Leary & Borsato, 2006). Social interactions contribute to the language acquisition process by providing exposure to language, opportunities to practice, and conversational feedback (Long, 1996; Lyster et al., 2013; Ortega, 2014). Children learn a language by engaging in social interactions, particularly with peers, and peers can effectively teach language and social skills development. (Heyes, 1993).

Classroom peers provide multiple opportunities for EB children to use language (Gerena & Kieler, 2012; Molloy Elreda et al., 2018). For instance, in a study with a sample of Spanish-speaking children in kindergarten through third grade found a positive link between English usage (e.g., verbal fluency, vocabulary, narrative coherence), word-level, and English reading comprehension skills (Miller et al., 2006), and there was a positive association between English vocabulary skills and peer interaction that was mediated by children's oral English language proficiency ($ES = 0.42$; Palermo & Mikulski, 2014). EBs benefit when interacting with English proficient peers who can model correct English language production (Carhill-Poza, 2015; Molloy Elreda et al., 2018) and increased exposure to language of monolingual peers contributed to EBs' vocabulary skills (Erdemir & Brutt-Griffler, 2020). EBs' language development can be supported through positive social interactions that impacts English reading skills.

Peer-Mediated Academic Interventions (PMAIs)

Typical efforts to improve outcomes for students who are not responsive to early literacy interventions have resulted in the implementation of intensive, teacher-led, small group, or one-on-one instruction (McMaster et al., 2005). Unfortunately,

this approach of systematically increasing the intensity of academic interventions may be challenging for many schools with limited resources because it involves additional personnel (Carr et al., 2007). Peer-mediated academic interventions (PMAIs) have been developed in the past several decades. The use of PMAIs has a long influence in educational settings (Cohen et al., 1982). Most are variants of cooperative learning or peer tutoring (Kohler & Strain, 1990; Utley & Mortweet, 1997).

Peer Tutoring

Peer tutoring is a widely used and well-studied intervention in which peers work together to provide one-on-one instruction, opportunities to respond, and provide feedback on academic skills (Utley et al., 1997). There is significant evidence of the usage of peer tutors to improve the academic achievement of at-risk students and students with disabilities across academic content areas (Moeyaert et al., 2021; Talbott et al., 2017), secondary level (Wexler et al., 2015), and EB students (Cole, 2014; Pyle et al., 2017). Peer tutoring interventions vary on several aspects.

Interventions involving peers to promote academic achievement include nonreciprocal peer tutoring (NRPT), classwide peer tutoring (CWPT; Delquadri et al., 1986), reciprocal peer tutoring (RPT), and Peer Assisted Learning Strategies (PALS; Fuchs et al., 1997). Reciprocal peer tutoring includes two students working together as a pair and taking turns to serve as the tutor (Fuchs et al., 1997). Whereas nonreciprocal peer tutoring involves a tutor and tutee to remain in the same roles (Mastropieri et al., 2000). Peer tutoring incorporates several principles of effective instruction such as, (a) one-one-one instruction with a peer partner, (b) increased opportunities to respond, (c) time on task, (d) positive social interactions with peers, and (e) improved academic performance (Greenwood et al., 1992). All students benefit from these

effective instructions, but they are especially critical for students who are struggling (Rupley et al., 2009).

Peer tutoring interventions are effective for EBs, as research has shown that working closely with a peer, can benefit students academically and linguistically (Bowman-Perrott et al., 2016; Kibler et al., 2019; Pyle et al., 2017). Peer tutoring interventions have a larger effect for students who have fewer resources at home or students who are acquiring the English language with parents who are not fluent in English to assist with corrective feedback during oral reading practices (Rohrbeck et al., 2003).

Several studies have evaluated peer tutoring for EB students in the United States. Three systematic reviews conducted previously emphasize the effects of PMAIs on EB's outcomes. Cole (2014) reviewed the effectiveness of peer-mediated learning on the literacy outcomes for elementary and secondary-age EB students across 28 studies. Finding revealed that PMAIs promote literacy gains and are more effective than individualized or teacher-centered comparison conditions for EB students ($g = 0.49$, $SE = .121$, $p < .001$). Similarly, Bowman-Perrott et al. (2016) examined on the academic effects of peer tutoring across 17 studies for 363 students in kindergarten through 12th grade. Results indicated that PMAIs are effective for EB students' academic, social, and linguistic outcomes. Finally, Pyle and colleagues (2017) examined the effects of PMAIs across 14 studies implemented with EBs in grades k-12. Results revealed that PMAIs are effective interventions in improving the reading skills in the areas of phonemic awareness, fluency, comprehension, and vocabulary for EB students. Specifically, seven of the eight studies included peer pairing that resulted in medium to large effects ($ES = 0.33$ to 1.31) on phonemic awareness, vocabulary, and comprehension outcomes when compared to teacher

instruction conditions (Plye et al., 2017). Overall, providing EB students with opportunities to engage in peer learning has been associated with academic achievement gains (Bowman-Perrott et al., 2016; Pyle et al., 2017; Thorious & Graff, 2018).

Classwide Peer Tutoring (CWPT)

Classwide peer tutoring (CWPT; Greenwood et al., 1989) is a highly effective peer tutoring model that has been shown to improve academic achievement in students across various subjects and grade levels. The program involves pairing students into tutor-tutee learning pairs in which they alternate roles and work on academic assignments (Carta et al., 1991). In addition, tutor-tutee pairings provide praise and rewards as positive reinforcement strategies (Utley et al., 1997). One of the most appealing aspects of CWPT is that it was designed to meet the specific needs of all learners and make it accessible and feasible to educators (Utley et al., 1997). The development of CWPT included teachers not creating extra work, all children benefiting, using existing instructional materials and resources, supplementing current instruction rather than replacing it, and utilizing existing instructional time periods (Delquadri et al., 1983). By meeting these criteria, CWPT provides an effective and efficient way for educators to support student learning and achievement. It also promotes positive peer interactions and relationships, which has shown to have additional benefits for students' social and emotional development (Bowman-Perrott et al., 2014).

Peer-Assisted Learning Strategies (PALS)

In the 1990s, a research group at Vanderbilt University developed a version of PMAI in reading and mathematics. Peer-Assisted Learning Strategies (PALS; Fuchs et al., 1997) was developed as a CWPT to address the diverse needs of students in

classrooms, particularly in the areas of reading fluency and comprehension. PALS grades 2-6 was developed to supplement teacher-led instruction to strengthen reading fluency and reading comprehension (Fuchs et al., 2021). PALS is implemented as a Tier 1 activity within the MTSS framework and is implemented with students in kindergarten, grades 2-6, and high school (McMaster & Fuchs, 2016). Students work in pairs together on reading activities to improve foundational reading skill such as phonological awareness, decoding, fluency, vocabulary, and comprehension (Thorius et al., 2017). PALS includes students working together in pairs by alternating roles as tutor and tutee, reading aloud, listening to their partner, and providing corrective feedback (Fuchs et al., 2008). The PALS program for Grades 2 through 6 is designed to increase students' reading fluency and comprehension skills (Sáenz et al., 2005). The program is structured in three activities: students work in pairs focused on teaching and reinforcing reading skills, students work in partner reading with retell, paragraph shrinking, and prediction relay (Hoover, 2013). Numerous evaluations of the PALS program have shown its effectiveness in improving the reading achievement of many students, including those with learning disabilities (Fuchs et al., 1997; Calhoon et al., 2005; Rafdal et al., 2011), EB students (Calhoon et al., 2006; McMaster et al., 2008, Sáenz et al., 2005), and students with emotional behavioral disorders (Ramsey et al., 2007).

Research has also examined the effects of PALS on specific student population. For instance, a study by McMaster and colleagues (2008) examined the effects of K-PALS on the beginning reading skills of kindergarten Spanish-speaking students. They found that students who received K-PALS outperformed control students on measures of phonemic awareness and letter sound recognition ($ES = .58$ to $.69$; McMaster et al., 2008). Another study examined PALS on the reading skills of

first grade students in a two-way bilingual immersion program (Calhoun et al., 2007). Results indicated that PALs might be more effective for native English speakers than for EBs in the areas of phoneme segmentation fluency (ES = 0.85 and -0.6) and oral reading fluency (ES = 0.56 and 0.38). However, PALS appeared to be more effective for EBs in measures of nonsense word fluency (ES = 1.29 and 0.31; Calhoun et al., 2007).

Path to Reading Excellence in School Sites (PRESS)

The Path to Reading Excellence in School Sites (PRESS, 2014), is a MTSS reading project that aims to help all students attain grade level reading skills by the end of third grade through tiered interventions, universal screeners, and progress monitoring. CWPT is one component of the PRESS project that has been implemented in various studies with positive results (Burns et al., 2016; Maki et al., 2021; Preast et al., 2019). The partner-reading intervention implemented with PRESS uses a brief repeated reading by two partners followed by paragraph shrinking as a comprehension strategy to help students identify the main idea of the text in 10 or less words (Burns et al., 2016; Fuchs & Fuchs, 2005).

Burns et al. (2016) implemented a 2-week partner reading and paragraph shrinking intervention with two third-grade classrooms in urban schools and found that the number of students who needed interventions decreased significantly after the CWPT through PRESS was implemented. Before the CWPT, students who needed additional interventions in reading was 52% in one classroom and 61% in the other, but those numbers decreased to 22% and 28% after the CWPT intervention. June et al. (2019) examined the effects of a 2-week CWPT with science reading materials on content comprehension skills with 126 fourth- and fifth-grade students and found that all students demonstrated an increase in reading scores from pre- to posttest measures.

Maki and colleagues (2021) experimentally examined the effects of a 2-week CWPT with many students with reading difficulties in two third-grade classrooms. The treatment group received a partner reading with paragraph shrinking, while the control group received business as usual for two school weeks. Results indicated that the treatment group significantly had greater fluency growth compared to the control group ($ES = 0.25$; Maki et al., 2021). Overall, these studies demonstrate the positive effects of providing a 2-week CWPT intervention to improve reading outcomes.

Theoretical Framework for the Research

Given that the study examined the effects of a specific PMAI on reading outcomes, it was implemented from a sociocultural perspective of language development, in which a child's knowledge and learning are impacted by the child's culture, context, and interactions with others (Bodrova & Leong, 2015; Vygotsky, 1978). The interactionist theories of language development postulate that children learn through their environment by frequent opportunities to verbally interact with individuals more knowledgeable (Vygotsky, 1978). Sociocultural research on second language learning has shown the importance of peers and peer scaffolding for language acquisition (De Houwer, 2009; Foster & Ohta, 2005; Vygotsky, 1978). Peer interactions not only serves as opportunities for students to model language, but also for practicing and using linguistic repertoires (Gómez & Shimpi, 2016). Therefore, children's language abilities and learning are a result of social interactions with more experienced peers.

The present study also focused on cross-linguistic transfer of language and literacy skills. Cross-linguistic transfer refers as the use of linguistic knowledge acquired in the first language (L1) transferred into the second language (L2) learning (Odlin, 1989). Therefore, bilingual children's two languages interact with each other,

and literacy gains in one language can be transferred and applied toward literacy gains in the other (Chung et al., 2019; Ramirez et al., 2013). The Spanish language has a consistent orthography in which one-to-one correspondence between phonemes and graphemes are used to represent them (Davies et al., 2007). In contrast, the English language has been described as an opaque or even “irregular” language (Foorman et al., 2003) because it requires students to use the 26 letters of the alphabet and be able to represent the 40 phonemes of the English language (Lyon, 2009). Researchers have shown that efficient readers can manipulate phonemes within words by segmenting, decoding, and reorganizing the sound structure of spoken words into print (Bar-Kochva & Breznitz, 2014; Jimenez, 2012).

There is evidence that cross-linguistic transfer of reading fluency occurs among EB students. De Ramírez and Shapiro (2007) investigated the relationship between text reading fluency in both English and Spanish among first through fifth grade bilingual students. Results indicated that students’ Spanish fluency scores in the fall were correlated with their English fluency scores in the spring. This result provides preliminary evidence for cross-linguistic transfer of oral reading fluency. Similarly, Baker and colleagues (2013) found that Spanish word reading and reading fluency scores in first grade impacted English reading comprehension scores at the end of second grade.

The interaction hypothesis and cross-linguistic framework provide theoretical support for the use of PMAIs for EBs. Specifically, EBs benefit when interacting with peers by providing modified input and opportunities for output through peer-mediated learning environments (Thomas & Collier, 2002). Peer-mediated learning could be a cost-effective way to support EBs’ language and literacy skills (Cole, 2014; Pyle et al., 2017).

Purpose

Although there is considerable research examining PMAIs for EBs, there is no current research examining the effect of an abbreviated PMAI for EBs. Building on prior research by Maki and colleagues (2021), the purpose of the present study is to evaluate an abbreviated PMAI for EB students in reading. Peer mediated reading intervention may be able to reduce the number of EB students who need additional intensive interventions, which may help reduce inappropriate referrals. Thus, the study sought to answer the following research questions:

Research Questions:

1. What is the effect of the peer-mediated reading intervention on the English oral reading fluency of EB students in Grade 2 to 5?
2. What is the effect of the peer-mediated reading intervention on the Spanish oral reading fluency of EB students in Grade 2 to 5?
3. What is the effect of the peer-mediated reading intervention on the Bilingual receptive vocabulary skills of EB students in Grade 2 to 5?
4. What is the effect of the peer-mediated reading intervention on the English reading comprehension skills of EB students in Grade 2 to 5?
5. To what extent does home language exposure affect the English and Spanish reading outcomes associated with the peer-mediated reading intervention for EB students in Grades 2 to 5?

CHAPTER III

METHOD

The study was conducted in a rural school district located in the Midwest with second through fifth-grade students in one elementary and one middle school. Students worked in pairs and were randomly assigned to one of two intervention conditions. Below are the research methods used in the study.

The purpose of this study was to investigate the effectiveness of a peer-mediated intervention on the literacy and language skills of emergent bilinguals. The current study sought to answer the following research questions:

1. What is the effect of the peer-mediated reading intervention on the English oral reading fluency of EB students in Grade 2 to 5?
2. What is the effect of the peer-mediated reading intervention on the Spanish oral reading fluency of EB students in Grade 2 to 5?
3. What is the effect of the peer-mediated reading intervention on the Bilingual receptive vocabulary skills of EB students in Grade 2 to 5?
4. What is the effect of the peer-mediated reading intervention on the English reading comprehension skills of EB students in Grade 2 to 5?
5. To what extent does home language exposure affect the English and Spanish reading outcomes associated with the peer-mediated reading intervention for EB students in Grades 2 to 5?

Participants and Setting

Following approval from the Institutional Review Board, the study was presented to local administrators and principals to request recruitment in their schools. Recruitment occurred over email and in-person meetings at the schools. The principal

investigator emailed all teachers at the school districts to inform them of the study. Teachers who shared interest in the study were given a written consent to the study procedures. Then, teachers signed an agreement of random assignment of the students and to keep the identity of participants private. Upon receiving the teacher written consent, parental consent forms were sent home. Finally, student assent was obtained before beginning data collection.

Schools

The study recruited schools from a rural school district located in the Midwest. According to Missouri Department of Elementary Secondary and Education (2021), students in this district are predominately White (83%) and approximately (15%) of the students speak another language beside English at home. School A had 450 students enrolled in kindergarten through fourth grade. A total of 27% of the students identify as Latinx, 54% identify as White, and 78% of the students were eligible for a free or reduced-price lunch (FRL). School B had 288 students enrolled in fifth grade. A total of 28% of the students identify as Latinx, 57% identify as White, 69% of the students are eligible for FRL.

Teachers

Five general education teachers from one elementary and two general education teachers from one middle school participated in the study. Based on teachers' self-reports, 100% were female. Most teachers were White (85%), and six of the seven teachers (86%) were Native English speakers. All teachers held a master's degree, and teaching experience averaged 10 to 20 years. Table 2 presents the teacher demographic information.

Students

Students were selected to participate in this study utilizing a multi-gated procedure. First, teachers were asked to refer all Spanish-Speaking EB students in their classroom. Second, schools provided a list of all the EB students enrolled in the selected teacher's classroom. To be eligible for the study, students were required to be Spanish-Speaking students and classified as an English Learner based on a score on the English language proficiency screener administered by the school district.

From this screener, a total of 64 Spanish-Speaking students were selected to participate in the study and were randomly assigned at the student level, within the classroom, either to a treatment condition ($n = 36$) or an active control condition ($n = 28$). Of the sample, 18.8% were from one second-grade classroom, 14.1% were from two third-grade classrooms, 17.2% were from two fourth-grade classrooms, and 50% were from four fifth-grade classrooms. More than half were male (54.7%) and 100% qualified for free or reduced-price lunch (FPL). According to parents, most children were of Mexican-American descent (32.8%), with the remaining being of Mexican descent, (40.6%), Central- or South-American descent (23.4%), and Puerto Rican descent (3.1%). There were no statistically significant differences between treatment conditions and grade level, $\chi^2(3) = 1.22, p = .748$, gender $\chi^2(1) = 1.37, p = .242$, and born in the United States, $\chi^2(1) = 3.628, p = .057$. Demographic information by conditions for all students are provided in Table 1.

A power analysis using G*Power (Faul et al., 2014) was conducted to establish the sample size required to find an effect size of $f = 0.352$ (based on $h^2 = 0.11$; Maki et al., 2021) with an alpha of .05, power of .80. two groups, and three covariates (FRL status, English proficiency score, and Spanish home exposure). Results indicated that 66 students would be needed. Based on prior work with similar outcomes (PRESS Research Group, 2014), the intraclass correlation of from fall to

winter assessments ranged from .02 to .06. Using an average ICC of .04 and an estimated average of 23 students per teacher, a design effect (Kish, 1965) was computed using $DEFF = 1 + ICC(n-1)$ or 1.92. The design effect is used as a sample size adjustment to account for the nesting of students within classrooms and as a result, 127 students will be required (i.e., 66×1.92). Though the proposed sample was 127 students, due to difficulties with recruitment, only 64 students participated in the study. The recruitment challenges are reviewed in the limitations section.

Table 1*Student Demographic Information*

Variables	Intervention (<i>n</i> = 36)			Control (<i>n</i> = 28)		
	<i>n</i>	%	<i>M</i> (<i>SD</i>)	<i>n</i>	%	<i>M</i> (<i>SD</i>)
English Language Proficiency			3.38 (0.93)			3.45 (0.68)
Grade						
Second	6	17		6	21	
Third	4	11		5	18	
Fourth	6	17		5	18	
Fifth	20	55		12	43	
Gender						
Female	14	39		15	54	
Male	22	61		13	46	
Nationality						
Mexican American	6	17		15	53	
Mexican	16	44		10	36	
Central or South American	12	33		3	11	
Puerto Rican	2	6		0	0	
Born in U.S.						
Yes	25	69		25	89	
No	11	31		3	11	
Free/Reduced price lunch						
Yes	36	100		28	100	
No	0	0		0	0	
Reader Type						
Reader 1	9	25		7	25	
Reader 2	27	75		21	75	
Partner Type						
Native English Speaker	28	78		22	79	
Nonnative English Speaker	8	22		6	21	

Table 2*Teacher Demographic Information*

Characteristics	<i>N</i>	%
Gender		
Female	7	100
Male	0	0
Race/Ethnicity		
Asian	0	0
Black	0	0
Hispanic/Latine	1	14
White	6	86
Other	0	0
Teacher years of experience		
Less than five years	0	0
Five to ten years	3	44
Ten to twenty years	2	28
Twenty or more years	2	28
Teacher education level		
Associate degree	0	0
Bachelor's degree	0	0
Master's degree	7	100
Language profile of the teacher		
Native English speaker	6	86
Nonnative English speaker	1	14

Measures

All students were assessed at pre- and postintervention with measures of reading fluency, bilingual receptive vocabulary, and reading comprehension. The measures are described below.

Language Screener

All students in the participating district who come from language minority households received an initial screening called the Assessing Comprehension and Communication in English State-to-State for English Learners (ACCESS, 2018) that measures students' English language proficiency in listening, speaking, reading, and writing. The school administered the ACCESS screener to identify all students who are EBs. The ACCESS assigns students' proficiency levels in English with scores ranging from 1 to 6, those being Entering = 1, Emerging = 2, Developing = 3, Expanding = 4, Bridging = 5, and Reaching = 6 English proficiency. The reliability for the oral language composite score is (.93 for Grade 1 and .94 for Grades 2-3; WIDA Consortium, 2018). The classification indexes accuracy for the oral language composite score are .62 for first grade, .83 for second grade, and .81 for third grade (WIDA Technical Report, 2018). The ACCESS overall composite scaled scores were provided by the school. The composite scaled scores include the four individual domain scores (Listening, Speaking, Reading, and Writing) to demonstrate overall English language proficiency.

English Reading Curriculum-Based Measure (R-CBM)

All students were assessed with R-CBM oral reading fluency (ORF) probes from AIMSweb (Pearson Education, Inc., 2010) prior to intervention. Students were asked to read aloud one grade-level passage for 1 min each, and words read correctly per minute (WRCM) were calculated. The errors were recorded when a student

omitted a word, misread a word, did not read a word within 3 seconds, or made a word substitution. R-CBM data have consistently shown to be reliable for EBs (De Ramírez & Shapiro, 2006). The reliability estimates for R-CBM range from .94 to .98 (Baker et al., 2008) and .89 to .95 (Yeo, 2011). Studies of the validity of R-CBMs for measuring overall reading achievement have also indicated the technical adequacy of R-CBM data (Wayman et al., 2007). Data for this measure consists of grade-level z scores based on words read correctly per minute.

Spanish Reading Curriculum-Based Measure (R-CBM)

Students were assessed with the Spanish R-CBM reading probes from AIMSweb (Pearson Education, Inc., 2010). The Spanish R-CBM probes from AIMSweb system are translations of the English R-CBM probes. There are no technical adequacy data is available for the R-CBM probes in Spanish. Keller-Margulis et al. (2012) provided preliminary evidence of the validity of R-CBM in Spanish for capturing the overall reading performance. Data for this measure consists of grade-level z scores based on words read correctly per minute.

Bilingual Receptive Vocabulary

The Receptive One-Word Picture Vocabulary Test—4: Spanish-Bilingual Edition (ROWPVT: SBE; Martin, 2013) was administered to screen for children's ability to identify pictured objects, actions, and concepts that are ordered by increasing difficulty, arranged in a developmental sequence specific to the bilingual normative sample. Children are presented with the target item first in Spanish. If a child indicated the incorrect answer or did not respond, the examiner repeated the question in English. The median internal consistency reliability coefficient is .95. Data for this measure consisted of age-based standard scores.

Reading Comprehension

All students were assessed using the easyCBM assessment system (Lai et al., 2012). The test is a timed, group administered assessment measuring a student's ability to read and understand literacy and informational passages (Lai et al., 2012). The measure contains narrative fiction passages and are followed by a multiple-choice question (20 questions). The length of the passage ranges from approximately 900 words at grade 2 to approximately 1500 words at grades 3-5 (Lai et al., 2012). Each question is comprised of the question stem and three possible answer choices. The comprehension measures have a total of 20 points possible; students earn one point for every question answered correctly. The overall reliability of the easyCBM reading comprehension for grades 3, split-half reliability coefficients ranged from .43 to .81, item reliability from Rasch analyses ranged from .39 to .94, and Cronbach's alpha ranged from .69 to .78 (Lai et al., 2012). Predictive and concurrent correlations between Grade 3 and 4 comprehension and spring state reading test scores of the Washington Measures of Student Progress (MSP) and Oregon Assessment of Knowledge and Skills (OAKS) were .52 to .70 and .37 to .68 respectively (Anderson et al., 2014). Data for this measure consists of norm-referenced grade-based standard scores.

Home Language Exposure

To measure children's Spanish and English language levels at home, parents completed eight items from the PAVEd for Success home literacy inventory (Hamilton et al., n.d). Each item asked parents to rate how often their child hears and speaks Spanish and English language during interactions with the mother, father, siblings, and other family members, as well as with friends and other people outside of home and school. Responses range from (1) never to (4) all of the time. Palermo et

al., (2017) used this measure and averaged the responses to create a home language exposure score for each child ($\alpha = 0.78$).

Procedures

Teachers implemented two treatment conditions simultaneously in their classrooms. The teacher training and conditions are described below. See Figure 1 for the flowchart of the participants.

Teacher Training

All teachers attended a 3-hour initial professional development (PD) meeting where researchers introduced the intervention, reviewed teacher and student materials, and answered teacher questions. The PD included explicit modeling of intervention procedures, guided practice opportunities, and independent practice in which teachers practiced implementing the partner reading with error correction and paragraph shrinking with a colleague. After the initial PD, researchers were available to teachers to provide feedback and explicit modeling of the intervention.

Conditions

This study implemented two conditions simultaneously: an intervention group and an active control group. Students were randomized to the treatment or control conditions by dyads. An online random number generator was applied to allocate each dyad of students to either group 1 (treatment) or group 2 (control). This method resulted in equal number per classroom to ensure a balance in size across the two groups. All students in both conditions were paired based on the English R-CBM score by arranging them from the highest to lowest score. The students were divided in half to create two groups: students in the upper half and students in the lower half. Students were paired by matching the highest reader in the upper half group with the highest reader in the lower half group, the second reader in the highest half group

were paired with the second reader in the lower half group, and so on to create pairs (Maki et al., 2021). Both conditions worked with a partner daily for 30 minutes for 2 weeks in their general education classrooms.

Each pair was assigned a Reader 1, who had the highest English R-CBM score, and a Reader 2, who had the lowest English R-CBM score in the pair. The treatment students were given a folder that contained a series of reading passages that was written for Reader 2's instructional level as determined by the pretest English oral reading fluency scores. While the control students were given a folder that contained a series of grade-level reading passages. Setup procedures consisted of having students move to a selected area in the classroom with their partner and get their folder.

Treatment Condition

Students in the treatment worked with a peer implementing partner reading with error correction and paragraph shrinking (Maki et al., 2021). The students worked daily for 30 minutes for 10 days in their general education classrooms.

Partner Reading with Error Correction

In pairs, the reader 1 (the more proficient reader) read the text aloud for 5 min while reader 2 followed along and provided standardized error correction (i.e., "This word is _____. What is this word?") as needed. If the reader made a mistake while reading, the partner will stop the reader, provide the correct word, and instruct the reader to re-read the sentence. If neither student knew the word, they raised their hands to ask the teacher for the word. The partners then switched roles after 5 min and reader 2 (the less proficient reader) read the same text aloud for 5 min while reader 1 followed along and provided error correction as needed.

Paragraph Shrinking

Following the 10 min partner reading with error correction, students engaged in paragraph shrinking activity for an additional 5 min per reader. Paragraph shrinking required the students to summarize the main idea of what they have read in 10 words or less. Reader 1 read aloud for 5 minutes and identified the most important *who* or *what*, of each paragraph and stated that in 10 words or less. reader 2 followed along and provided error correction as needed. The partner then switched roles after 5 min and reader 2 read where reader 1 left off in the text for 5 min implementing paragraph shrinking. Reader 1 followed along and provided error correction as needed.

Control condition

Students in the control condition were instructed to do continuous reading with a partner for 20 minutes. Reader 1 (the more proficient reader) read a grade-level passage aloud for 10 min while reader 2 followed along. The partners then switched roles after 10 min and reader 2 (the less proficient reader) read where reader 1 left off in the text aloud for 10 min while reader 1 followed along. The students worked daily for 30 minutes for 10 days in their general education classrooms.

Reading Passages

Passages were selected from www.readingA-Z.com, The Reading A-Z program includes a leveling system in which reading materials are categorized into quantitative measures (e.g., total words count, grade level, age level, the ratio of high-frequency words to total words), and qualitative measures (e.g., student's background and interests). The passages were informational, non-fiction texts. Each reading passage ranged from 5-10 pages long. The passages included keywords that were defined and connected to the overall understanding of the passage. The passages for the treatment students were identified based on reader's 2 Lexile range as an

appropriate representation of the student's instructional level. The passages for the control students were identified based on the student's Grade Level.

Fidelity of Implementation

Implementation fidelity was assessed across all classrooms. Before implementation, the primary investigator modeled the set-up procedures, partner reading procedures, and error correction procedures for one classroom in each school building as the remaining teachers observed. Next, the classroom teachers modeled the procedures for the remaining classrooms as the primary investigator observed with an implementation fidelity checklist. The number of steps correctly implemented by the teacher was divided by the total number of steps and multiplied by 100 to get an overall percentage. The classroom teacher administering the intervention components needed to meet a 90-100% adherence of the implementation procedures prior to the intervention. During the intervention, each classroom was observed for 25% of the total intervention sessions to ensure students were completing each step when delivering the intervention. Implementation fidelity was scored on a nine-item checklist that detailed all intervention components and instructional routines. The mean implementation adherence score was 97.90% ($SD = 4.28$).

Data Analysis Plan

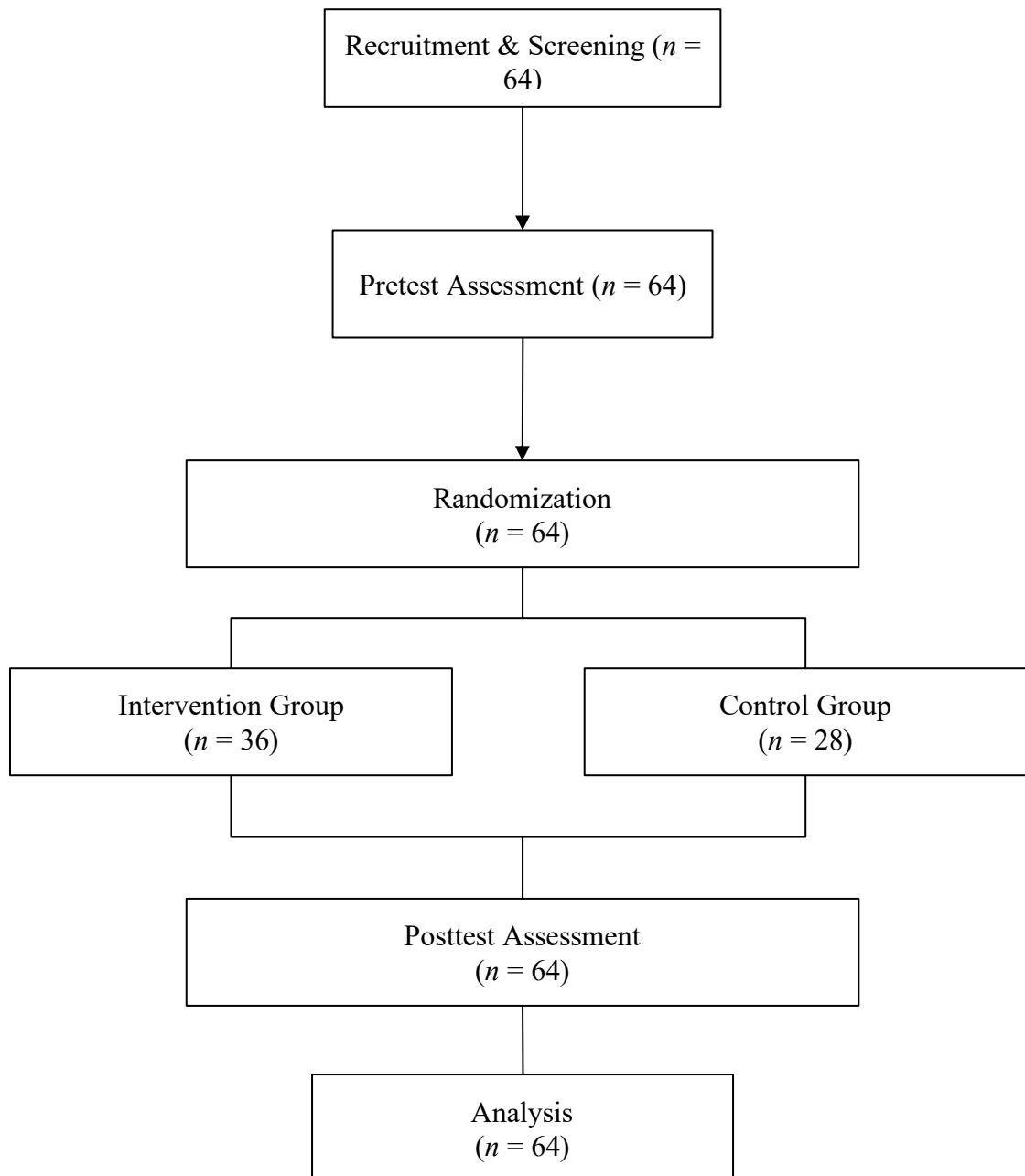
This study incorporated a randomized experimental design. Descriptive analyses were conducted with SPSS statistics version 27 to examine the mean scores (with standard deviations) for student measures and calculate participating students' demographics. The first four research questions compared the intervention effects of the two conditions on different reading measures. Before conducting any effects analyses, treatment conditions were compared using a one-way ANOVA to determine if they were significantly different on any measures. The two conditions were not

significantly different on any measures. To investigate the effects of the peer-mediated intervention on the different reading outcomes, multiple steps were taken. First, mean pre-test scores were examined to see if they were significantly similar across treatment and comparison conditions. Then, preliminary analyses were conducted to check the assumptions for ANCOVA. After checking all assumptions, the main analyses were completed using ANCOVA models to investigate the effects of the peer-tutoring intervention on each outcome using pretest scores, grade level, and ACCESS scores as a covariate. An alpha of .01 was used to rule out error did not occur. The eta squared was also calculated and interpreted as .01 as a small effect, .06 as moderate effect, and .14 or larger as a large effect (Cohen, 1988).

The final research question was analyzed using a hierarchical regression analysis, to investigate if the effect of the peer-mediated intervention on student reading outcomes were affected by home language exposure. To answer this question a series of regression models were conducted to test the effect of the two treatment conditions compared to each other on each outcome of reading measures for the home language exposure. In Model 1, pretest scores and demographic variables were inserted. In Model 2, condition groups were inserted. Finally, in Model 3 home language exposure were inserted.

Figure 1

Flowchart of the Participants



CHAPTER IV

RESULTS

The purpose of this study was to examine the effects of an abbreviated classwide peer-mediated literacy intervention on the language and literacy outcomes among EB students in a rural school setting. The results are presented based on the research question. First, descriptive statistics are reviewed. Then results from Research Question (RQ) 1 examine the effect of an abbreviated peer-mediated literacy intervention on English oral reading fluency. Second, results are presented for RQ 2 on the effect of an abbreviated peer-mediated literacy intervention on Spanish oral reading fluency. Third, results are presented for RQ 3 on the effect of an abbreviated peer-mediated literacy intervention on bilingual receptive vocabulary. Fourth, results are presented for RQ 4 on the effect of an abbreviated peer-mediated literacy intervention on English reading comprehension. Lastly, results for RQ 5 are reviewed, which examines home language exposure effect on the intervention and English oral reading fluency, Spanish oral reading fluency, Bilingual receptive vocabulary, and English reading comprehension outcomes.

Descriptive Data

The sample consisted of 64 Spanish-Speaking EB students. The data displayed in Table 3 include descriptive statistics for all outcome measures. Parents were asked to complete a questionnaire for their child as part of this study to measure home language exposure. On the parent questionnaire, lower scores are indicative of less home language exposure. Table 4 presents descriptive statistics in relation to the single-item questions regarding English home language exposure. Descriptive

statistics are presented in Table 5 in relation to the single-item questions regarding Spanish home language exposure.

Table 3

Pretest and Posttest Data by Condition

	<u>Pretest</u>		<u>Posttest</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
English Reading Fluency				
Treatment	77.17	51.10	93.17	54.43
Control	87.11	46.30	102.82	48.46
Spanish Reading Fluency				
Treatment	35.92	29.58	44.80	31.78
Control	25.62	25.53	29.18	19.41
Bilingual Receptive Vocabulary				
Treatment	95.23	10.30	108.43	14.89
Control	96.07	12.40	101.67	11.82
English Reading Comprehension				
Treatment	9.13	4.30	11.14	3.64
Control	10.90	3.60	10.46	3.52

Table 4*Single-item Questions Pertaining to English Home Language*

	Min	Max	<i>M</i>	<i>SD</i>
How often does your child HEAR English at home from his/her mother?	0	3	0.97	1.08
How often does your child HEAR English at home from his/her father?	0	3	0.81	0.97
How often does your child HEAR English at home from siblings/other family members?	0	3	1.61	0.95
How often does your child HEAR English at home from friends?	0	3	1.89	0.82
How often does your child HEAR English at home with other people outside of home and school?	0	3	1.53	0.87
How often does your child SPEAK English at home from his/her mother?	0	3	1.06	0.97
How often does your child SPEAK English at home from his/her father?	0	3	0.88	0.90
How often does your child SPEAK English at home from siblings/other family members?	0	3	1.73	0.80
How often does your child SPEAK English at home from friends?	0	3	1.78	0.75
How often does your child SPEAK English at home with other people outside of home and school?	0	3	2.00	0.78

Table 5*Single-item Questions Pertaining to Spanish Home Language*

	Min	Max	<i>M</i>	<i>SD</i>
How often does your child HEAR Spanish at home from his/her mother?	1	3	2.48	0.64
How often does your child HEAR Spanish at home from his/her father?	0	3	2.36	0.89
How often does your child HEAR Spanish at home from siblings/other family members?	1	3	2.30	0.58
How often does your child HEAR Spanish at home from friends?	0	3	2.05	0.86
How often does your child HEAR Spanish at home with other people outside of home and school?	0	3	1.95	0.92
How often does your child SPEAK Spanish at home from his/her mother?	0	3	2.36	0.95
How often does your child SPEAK Spanish at home from his/her father?	0	3	2.48	0.78
How often does your child SPEAK Spanish at home from siblings/other family members?	0	3	1.91	0.92
How often does your child SPEAK Spanish at home from friends?	0	3	1.36	0.93
How often does your child SPEAK Spanish at home with other people outside of home and school?	0	3	1.52	0.91

English Oral Reading Fluency

The first research question inquired about the relative effect of the intervention on English oral reading fluency. Table 6 presents the results of the relative effect of a peer-mediated intervention on the English oral reading fluency measure. An ANCOVA was conducted on posttest English reading fluency scores with pretest, grade, and ACCESS scores serving as covariates. Results showed no significant differences between the conditions on English oral reading fluency, $F(1,59) = .024$, $p = 0.87$.

Table 6

Intervention Effects for Treatment and Control Conditions

Measures	Group	F	Adjusted Mean	Standard error	p	η^2
English ORF	T	.024	97.12	2.91	0.87	< .001
	C		97.73	2.56		
Spanish ORF	T	6.43	41.14	2.01	0.01	0.10
	C		37.57	1.76		
Bilingual Recep. Voc.	T	6.91	108.34	1.63	0.01	0.10
	C		101.75	1.87		
English Reading Com.	T	18.22	11.79	0.32	<.001	0.24
	C		9.63	0.37		

Note: T = treatment condition; C = control condition; ORF = oral reading fluency; Voc = vocabulary; Com = comprehension. F is an analysis of covariance using the pretest, grade, and Assessing Comprehension and Communication in English State-to-

State for English Learners (ACCESS) measure as covariates.

Spanish Oral Reading Fluency

The second research question investigated the relative effect of the intervention on Spanish oral reading fluency. Table 6 summarizes the results of the effect of a peer-mediated intervention on the Spanish oral reading fluency measure. An ANCOVA was used to evaluate intervention effects on the Spanish oral reading fluency measure with Spanish oral reading fluency pretest score, grade, and ACCESS scores serving as covariates. Results showed significant differences between the conditions on Spanish oral reading fluency, $F(1,59) = 6.43$, $p = .01$, with an effect size $\eta^2 = 0.10$. This effect appears to be moderately large. Given there were only two conditions, no further follow-up was required.

Bilingual Receptive Vocabulary

The third research question investigated the relative effect of the intervention on the bilingual receptive vocabulary. Table 6 describes the results of the effect of a peer-mediated intervention on the bilingual receptive vocabulary measure. An ANCOVA was used to evaluate intervention effects on the bilingual receptive vocabulary measure with the pretest score, grade level, and ACCESS scores serving as covariates. There were significant differences between conditions found on the bilingual receptive vocabulary, $F(1, 59) = 6.91$, $p = .01$, with an effect size $\eta^2 = 0.10$. This effect appears to be moderately large. Given there were only two conditions, no further follow-up was required.

Reading Comprehension

The fourth research question investigated the relative effect of the intervention on the reading comprehension. Table 6 describes the results of the effect of a peer-mediated intervention on the reading comprehension measure. An ANCOVA was

used to evaluate intervention effects on the reading comprehension measure with the pretest score, grade level, and ACCESS scores serving as covariates. There were significant differences between conditions found on the reading comprehension, $F(1, 59) = 18.22, p < .001$, with an effect size $\eta^2 = 0.24$. This effect appears to be large. Given there were only two conditions, no further follow-up was required.

Home Language Exposure on Literacy and Language

The final research question investigated whether children's home language exposure affected the intervention on language and literacy skills. Hierarchical regression analyses were conducted to evaluate whether home language exposure affected the intervention on the language and literacy measures. For Model 1, the pretest score, grade level, and ACCESS scores were inserted. For Model 2, the treatment condition was inserted. Finally in Model 3, home language exposure was inserted.

English Home Language Exposure on English Oral Reading Fluency. As displayed in Table 7, results revealed that pretest scores ($B = 0.92, p < .01$) was significant, while ACCESS scores ($B = 4.44, p > .01$) and Grade Level ($B = 2.86, p > .01$) were both insignificant on English oral reading fluency scores for Model 1, which accounted for 92% of the variance. In Model 2, the condition variable on the English oral reading fluency scores was insignificant ($B = -0.62, p > .01$) and accounted for an additional 0.1% of the variance. In Model 3, the variable of English home language exposure was inserted. Results showed that English home language exposure on the English oral reading fluency was insignificant ($B = 0.99, p > .01$). In summary, the amount of English language exposure a child received at home did not affect the scores on the English oral reading fluency measure.

Table 7*English Home Language Exposure on English Reading Fluency.*

	Model 1	Model 2	Model 3
	B (SE)	B (SE)	B (SE)
Intercept	- 4.07 (8.78)	-3.73 (9.11)	-4.25 (9.46)
Pretest	0.92* (0.05)	0.92* (0.05)	0.92* (0.05)
Grade	2.86 (2.02)	2.94 (2.10)	3.04 (2.16)
ACCESS	4.44 (3.31)	4.38 (3.36)	4.01 (3.76)
Condition		-0.62 (3.94)	-0.63 (3.98)
English Home Language			0.99 (4.35)
R^2 Change	0.92	0.001	0.001
Adjusted R^2	0.91	0.91	0.91

Note: ACCESS = Assessing Comprehension and Communication in English State-to-State for English Learners. * $p < 0.01$.

English Home Language Exposure on Spanish Reading Fluency. Table 8 presents the results for English home language exposure on Spanish reading fluency. In Model 1, results revealed that pretest scores ($B = 0.97, p < .01$) on the posttest Spanish oral reading fluency was significant, while ACCESS scores ($B = 1.11, p > .01$) and Grade Level ($B = -0.47, p > .01$) were both insignificant, which accounted for 89% of the variance. In Model 2, the condition variable on the Spanish oral reading fluency posttest scores was insignificant ($B = 4.97, p > .01$) and accounted for an

additional 1% of the variance. In Model 3, the variable of English home language exposure was entered. Results showed that English home language exposure on Spanish oral reading fluency posttest scores was insignificant ($B = -5.39, p > .01$), indicating scores on Spanish oral reading fluency measure was not affected by the amount of English language exposure a child received at home.

Table 8

English Home Language Exposure on Spanish Reading Fluency

	Model 1	Model 2	Model 3
	B (SE)	B (SE)	B (SE)
Intercept	6.59 (5.87)	3.34 (6.02)	5.27 (6.03)
Pretest	0.97* (0.05)	0.96* (0.05)	0.93* (0.05)
Grade	-0.47 (1.55)	-0.99 (1.55)	-1.05 (1.52)
ACCESS	1.11 (1.99)	1.91 (2.00)	4.01 (2.32)
Condition		4.97 (2.71)	5.51 (2.67)
English Home Language			-5.39 (3.16)
R^2 Change	0.89	0.01	0.01
Adjusted R^2	0.88	0.89	0.89

Note: ACCESS = Assessing Comprehension and Communication in English State-to-State for English Learners. * $p < 0.01$.

English Home Language Exposure on Bilingual Receptive Vocabulary. As presented in Table 9, the pretest scores ($B = 0.84, p < .01$) and ACCESS scores ($B = -5.49, p < .01$) on the posttest bilingual receptive vocabulary scores were both significant, while Grade Level ($B = 1.67, p > .01$) was insignificant in Model 1, which accounted for 49% of the variance. In Model 2, the condition variable on the bilingual receptive vocabulary scores was significant ($B = 6.40, p < .01$) and accounted for an additional 5% of the variance. In Model 3, results indicated that English home language exposure on the bilingual receptive vocabulary scores was not statistically significant ($B = -5.05, p > .01$). Overall, the amount of English language exposure a child received at home did not affect the posttest bilingual receptive vocabulary scores.

Table 9

English Home Language Exposure on Bilingual Vocabulary

	Model 1	Model 2	Model 3
	B (SE)	B (SE)	B (SE)
Intercept	37.6* (13.14)	33.8* (12.64)	37.1* (12.5)
Pretest	0.84* (0.12)	0.83* (0.11)	0.82* (0.11)
Grade	1.67 (1.37)	0.90 (1.35)	0.39 (1.35)
ACCESS	-5.49* (1.89)	-4.31 (1.88)	-2.49 (2.08)
Condition		6.40* (2.47)	6.46* (2.46)
English Home Language			-5.05 (2.66)

R^2 Change	0.49	0.05	0.02
Adjusted R^2	0.47	0.52	0.54

Note: ACCESS = Assessing Comprehension and Communication in English State-to-State for English Learners. * $p < 0.01$.

English Home Language Exposure on English Reading Comprehension.

Table 10 summarizes the regression model results for English reading comprehension. In Model 1, results revealed that the regression effects of pretest scores ($B = 0.69, p < 0.01$) was significant, while ACCESS scores ($B = 0.08, p > .01$) and Grade Level ($B = 0.02, p > .01$) on the posttest reading comprehension scores were both insignificant, which accounted for 66% of the total variance. In Model 2, the condition variable on the posttest English reading comprehension scores was significant ($B = 2.15, p < .01$) and accounted for an additional 8% of the variance. In Model 3, results showed that English home language exposure on the English reading comprehension skills was not statistically significant ($B = -0.70, p > .01$). In summary, the amount of English language exposure a child received at home did not affect the posttest English reading comprehension scores.

Table 10*English Home Language Exposure on Reading Comprehension*

	Model 1	Model 2	Model 3
	B (SE)	B (SE)	B (SE)
Intercept	3.60* (1.16)	2.18* (1.07)	2.52* (1.10)
Pretest	0.69* (0.08)	0.77* (0.07)	0.78* (0.07)
Grade	0.02 (0.28)	-0.27 (0.26)	-0.35 (0.26)
ACCESS	0.08 (0.43)	0.28 (0.38)	0.53 (0.43)
Condition		2.15* (0.50)	2.17* (0.50)
English Home Language			-0.70 (0.54)
R^2 Change	0.66	0.08	0.01
Adjusted R^2	0.64	0.72	0.73

Note: ACCESS = Assessing Comprehension and Communication in English State-to-State for English Learners. * $p < 0.01$.

Spanish Home Language Exposure on English Reading Fluency. Table 11 presents the regression models results. In Model 1, pretest scores ($B = 0.92, p < .01$) on the posttest English oral reading fluency was significant, while ACCESS scores ($B = -4.07, p > .01$) and Grade Level ($B = 2.86, p > .01$) were both insignificant, which accounted for 92% of the variance. In Model 2, the condition variable on the posttest English oral reading fluency scores was insignificant ($B = -0.62, p > .01$) and

accounted for an additional 0.1% of the variance. In Model 3, the variable of Spanish home language exposure was inserted. Results showed that Spanish home language exposure on the English oral reading fluency was insignificant ($B = -3.61, p > .01$), indicating scores on the posttest English oral reading fluency measure was not affected by the amount of Spanish language exposure a child received at home.

Table 11

Spanish Home Language Exposure on English Reading Fluency

	Model 1	Model 2	Model 3
	B (SE)	B (SE)	B (SE)
Intercept	- 4.07 (8.78)	-3.73 (9.11)	5.25 (14.4)
Pretest	0.92* (0.05)	0.92* (0.05)	0.92* (0.06)
Grade	2.86 (2.02)	2.94 (2.10)	3.35 (2.17)
ACCESS	4.44 (3.31)	4.38 (3.36)	3.42 (3.57)
Condition		-0.62 (3.94)	-0.46 (3.96)
Spanish Home Language			-3.61 (4.48)
R^2 Change	0.92	0.001	0.001
Adjusted R^2	0.91	0.91	0.91

Note: ACCESS = Assessing Comprehension and Communication in English State-to-State for English Learners. * $p < 0.01$.

Spanish Home Language Exposure on Spanish Reading Fluency. Table 12 summarizes the results. In Model 1, results revealed that pretest scores ($B = 0.97, p <$

.01) on the posttest Spanish oral reading fluency was significant, while ACCESS scores ($B = 1.11, p > .01$) and Grade Level ($B = -0.47, p > .01$) were both insignificant, which accounted for 89% of the variance. In Model 2, the condition variable on the posttest Spanish oral reading fluency scores was insignificant ($B = 4.97, p > .01$) and accounted for an additional 1% of the variance. In Model 3, results showed that Spanish home language exposure on the Spanish oral reading fluency was insignificant ($B = 0.96, p > .01$). Overall, the amount of Spanish language a child was exposed at home did not affect the Spanish oral reading fluency scores.

Table 12

Spanish Home Language Exposure on Spanish Reading Fluency

	Model 1	Model 2	Model 3
	B (SE)	B (SE)	B (SE)
Intercept	6.59 (5.87)	3.34 (6.02)	0.85 (10.2)
Pretest	0.97* (0.05)	0.96* (0.05)	0.96* (0.05)
Grade	-0.47 (1.55)	-0.99 (1.55)	-1.05 (1.57)
ACCESS	1.11 (1.99)	1.91 (2.00)	2.16 (2.19)
Condition		4.97 (2.71)	4.94 (2.73)
Spanish Home Language			0.96 (3.18)
R^2 Change	0.89	0.01	.002
Adjusted R^2	0.88	0.89	0.89

Note: ACCESS = Assessing Comprehension and Communication in English State-to-State for English Learners. * $p < 0.01$.

Spanish Home Language Exposure on Bilingual Receptive Vocabulary.

As displayed in Table 13, the results of pretest scores ($B = 0.84, p < .01$) and ACCESS scores ($B = -5.49, p < .01$) were both significant, while Grade Level ($B = 1.67, p > .01$) was insignificant on the posttest bilingual receptive vocabulary scores in Model 1, which accounted for 49% of the variance. In Model 2, the condition variable on the posttest bilingual receptive vocabulary scores was significant ($B = 6.40, p < .01$) and accounted for an additional 5% of the variance. In Model 3, results showed that Spanish home language exposure on the bilingual receptive vocabulary skills was insignificant ($B = 3.55, p > .01$). In summary, the posttest bilingual receptive vocabulary measure was not affected by the amount of Spanish language exposure a child received at home.

Table 13

Spanish Home Language Exposure on Bilingual Vocabulary

	Model 1	Model 2	Model 3
	B (SE)	B (SE)	B (SE)
Intercept	37.6* (13.1)	33.8* (12.6)	25.8 (14.0)
Pretest	0.84* (0.12)	0.83* (0.11)	0.82* (0.11)
Grade	1.67 (1.37)	0.90 (1.35)	0.47 (1.39)
ACCESS	-5.49* (1.89)	-4.31(1.88)	-3.48 (1.99)
Condition		6.40* (2.47)	6.25* (2.46)

Spanish Home Language	3.55 (2.80)
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R^2 Change	0.49	0.05	0.02
Adjusted R^2 square	0.47	0.52	0.54

Note: ACCESS = Assessing Comprehension and Communication in English State-to-State for English Learners. * $p < 0.01$.

Spanish Home Language Exposure on English Reading Comprehension.

As displayed in Table 14, results of pretest scores ($B = 0.69, p < .01$) was significant, while ACCESS scores ($B = 0.08, p > .01$) and Grade Level ($B = 0.02, p > .01$) on the posttest reading comprehension scores were both insignificant in Model 1, which accounted for 66% of the variance. In Model 2, the condition variable on the posttest English reading comprehension scores was significant ($B = 2.15, p < .01$) and accounted for an additional 8% of the variance. In Model 3, results showed that Spanish home language exposure on the English reading comprehension skills was insignificant ($B = 0.39, p > .01$), indicating scores on the posttest English reading comprehension measure was not affected by the amount of Spanish language exposure a child received at home.

Table 14*Spanish Home Language Exposure on Reading Comprehension*

	Model 1	Model 2	Model 3
	B (SE)	B (SE)	B (SE)
Intercept	3.60* (1.16)	2.18 (1.07)	1.19 (1.78)
Pretest	0.69* (0.08)	0.77* (0.07)	0.77* (0.07)
Grade	0.02 (0.28)	-0.27 (0.26)	-0.32 (0.27)
ACCESS	0.08 (0.43)	0.28 (0.38)	0.38 (0.41)
Condition		2.15* (0.50)	2.17* (0.51)
English Home Language			0.39 (0.56)
R square Change	0.66	0.08	0.001
Adjusted R square	0.64	0.72	0.72

Note: ACCESS = Assessing Comprehension and Communication in English State-to-

State for English Learners. * $p < 0.01$.

CHAPTER V

DISCUSSION

This chapter will outline the results and implications for the findings under each research question and discuss implications for practice, limitations, and future directions.

Summary of Findings

The current study investigated a 2-week experimental study of a peer-mediated literacy intervention with 64 Spanish-speaking EB students in second through fifth grade from one rural school district. The current study sought to (a) determine the effect of a classwide partner reading intervention had on post-intervention reading outcomes and (b) examine the extent to which home language exposure affected the intervention outcomes.

Effects of Peer-Mediated Literacy Intervention

The current data provided preliminary evidence regarding the effects of an abbreviated classwide peer-mediated literacy intervention with EB students that used partner reading with paragraph shrinking (Maki et al., 2021). The first research question examined the effects of the intervention on the English reading fluency. The difference in postintervention English reading fluency between treatment and control conditions was not significant. Thus, the peer-mediated intervention was equally effective as continuous reading for promoting expected increases in English reading fluency outcomes for EB students in second through fifth grade. Students in the treatment condition increased by 16 words read correctly per minute in oral reading fluency, while the active control condition increased by 15.71 words read correctly per minute in oral reading fluency. This finding supports previous research on reading

fluency interventions and their effectiveness on increasing reading fluency (Burns et al., 2016; Maki et al., 2021). Maki et al. (2021) found that students in the treatment group increased by 13.11 words read correctly per minute, while those in the control group increased by 2.41 words read correctly per minute. Similar results were found in Burns et al. (2016); the class median score increased for both classrooms that implemented the classwide peer-mediated intervention, with increases of 28 and 23 words read correctly. Both conditions from the current study performed similarly on the English reading fluency measure because they both had the opportunity to practice reading aloud with a partner, and the control condition increased more than usual. Increased opportunities to practice reading aloud are recommended strategies when delivering interventions (Lee & Yoon, 2017).

The second research question examined the effects of the intervention on Spanish reading fluency. Students in the treatment performed significantly higher than students in the control condition on the Spanish reading fluency measure. In Spanish oral reading fluency, students in the treatment condition increased by 8.88 words read correctly per minute, while the active control condition increased by 3.56 words read correctly per minute. Both conditions used partner reading which may have demonstrated a cross-language transfer of fluency skills in Spanish (August & Shannon, 2006), but that is a hypothesis in need of future research.

The third research question examined the effects of the intervention on the bilingual receptive vocabulary skills. In bilingual receptive vocabulary, students in the treatment condition increased by 13.2 in their receptive vocabulary words, while the active control condition increased by 5.6 vocabulary words. The current data demonstrated the effectiveness of a peer-mediated intervention for EBs by providing students with opportunities to practice literacy and language content with peers and

receive immediate delivery of corrective feedback. Students in the treatment group scored significantly higher than those in the control group in bilingual receptive vocabulary. Previous research highlights the benefits of working with peers to increase active engagement and vocabulary outcomes for EBs (Heron et al., 2006; Maheady et al., 2006). Findings from this study suggest that peer-mediated interventions may be particularly beneficial for EB students.

The fourth research question examined the effects of the intervention on English reading comprehension. In reading comprehension, students in the treatment condition increased by 2.01 questions answered correctly, while the active control condition decreased by 0.53 questions answered correctly. The positive effects of partner reading with paragraph-shrinking instruction on students' reading comprehension outcomes align with multiple previous studies (e.g., Burns et al., 2016; Maki et al., 2021; Preast et al., 2019). Students in the treatment condition had many opportunities to engage in guided practice, working collaboratively with peers to summarize each paragraph using 10 words or less, and eventually composing oral summaries of the paragraph. Many partner-reading interventions incorporate paragraph shrinking as a comprehension strategy to help students identify the main idea of the text in 10 or fewer words (Burns et al., 2016).

Home Language Exposure Levels

The final research question sought to determine the extent to which home language exposure modified the effects of the classwide peer-mediated literacy intervention on students' literacy and language skills. Neither English nor Spanish language exposure levels from family members in the home significantly moderated the effects of the intervention on students' literacy and language skills. That is, the

classwide peer-mediated literacy intervention was equally beneficial for EB students regardless of the home language exposure levels from family members in the home.

The findings raise an important question about the positive effects of classwide peer-mediated interventions for Spanish-Speaking EB students' literacy and language skills, but not home language exposure levels at home. The difference might stem from the classroom settings in which literacy and language skills are attained (Gerena & Kieler, 2012). Peer interactions play a key role in facilitating students' learning of literacy and language skills presented during the classwide peer-mediated intervention by fostering student engagement (Long, 1996). Previous research found that linguistic exposure with peers in English correlate positively with Spanish-speaking preschoolers' English literacy skills (Palermo et al., 2017). The current findings are consistent with the interaction hypothesis for second language learners in that children need repeated opportunities to practice language (Long, 1996). The classwide peer-mediated intervention provided many opportunities to interact with a peer by allowing Spanish-Speaking EB students to negotiate meaning and facilitate comprehension of language. More research is needed to examine how different types of classwide peer-mediated interventions contribute to Spanish-Speaking EB students' literacy and language skills.

Implications for Practice

Results from this study have important implications within the school psychology and education field. These findings shed new light on instructional practices that may be effective for EB students. Findings from this study represent the outcomes of students who were exposed to the partner reading with paragraph shrinking intervention within a two-week period. The findings show promise of reading fluency, vocabulary, and comprehension-based intervention to improve

performance for EB students. Partner reading with paragraph shrinking is an interesting option for school psychologists and educators to consider for EB students. School personnel can use the classwide peer-mediated reading intervention with students as a quick and cost-effective intervention that can be implemented within a few minutes daily to support students to become proficient with literacy and language.

The positive use of peer-mediated interventions has been well documented within the literature (Cole, 2014; Pyle et al., 2017), yet there still needs to be empirically validated approaches that are found to be effective within a shortened period (Maki et al., 2021). This study used a randomized design to evaluate such an approach and the current study contributed to establishing evidence-based instructional practices for EB students. Thus, partner reading with paragraph shrinking has the advantage over similar reading interventions because it effectively improves literacy and language skills and allows students to work independently (Burns et al., 2016). School psychologists could consult with individual teachers to implement classwide peer-mediated interventions to support EB students and reduce the number of students who need additional targeted instructions.

Implications for Theory

According to the social interaction theory, children learn to understand and speak a language by engaging with others that offer opportunities to hear and use language in social interactions (De Houwer, 2009). Peer interactions not only serves as opportunities for language modeling, but it also provides opportunities to practice and use linguistic repertoires (Gámez & Shimpi, 2016). Therefore, children's language abilities and learning are a result of social interactions with more experienced peers. The partner reading with paragraph shrinking intervention of the current study aligns with the social interaction theory that children's literacy and

language abilities are influenced by peer interaction (Carhill–Poza, 2015). The current study suggests that more research is warranted on peer-mediated interventions in Tier 1 to support EB students. Further research on the social interaction theory is needed to conclude that context and peer interaction are influencing academic results.

Limitations and Future Directions

Findings from this study have important implications within the field of education, but there are a few limitations that must be considered. First, it is important to consider the student sample, which was limited in size ($n = 64$) due to recruitment during COVID-19. A larger sample size would increase power to improve the generalizability of the findings. The homogenous nature of the sample also likely limited study generalizability, as participants were Spanish-Speaking Latine students in second through fifth grade. When considering the impact of student-level variables, it is important to consider these variables across individuals of different races, ethnicities, grade level, and languages. Future research might replicate this design with more classrooms.

A second limitation was the active control condition, the study did not have a business-as-usual control group. While the study used a randomized cluster design to allocate students to treatment and control condition, there were only six classrooms. Further studies could explore a business-as-usual control group across the active control and intervention condition to examine the benefits of a peer-mediated intervention for EB students. Additionally, the study demonstrated the effects of the classwide peer-mediated literacy intervention over a 2-week period. Future researchers could implement the classwide peer-mediated intervention for longer or shorter duration to examine the effects.

A third limitation is that the study did not collect data on the maintenance of intervention, and unsure if the effects of the abbreviated classwide peer-mediated literacy intervention were sustained. Although the study documents encouraging evidence that the partner reading with paragraph shrinking may be beneficial for EB students, future studies could examine the extent to which students maintain literacy and language gains.

A fourth limitation is that the study did not evaluate the core instruction provided by the general education teachers. The present study purpose was to examine the effectiveness of an abbreviated classwide peer-mediated interventions within an MTSS framework; however, core reading instruction is a key component of an effective Tier 1 MTSS Framework as it plays a significant role in supporting student's reading development (Hoover & Soltero-González, 2018). Therefore, future studies could examine core instruction. Additionally, although students received the classwide interventions during a certain time block, it is possible that some students may have received additional intervention supports during other parts of the school day.

Another notable limitation is that the study calculated the quantity of children's exposure to both English and Spanish at home via a parent questionnaire. The measure of home language exposure did not capture the quality of the home language a child was exposed to at home, for example, its lexical richness, grammatical complexity, and the nature of feedback (Palermo et al., 2017). Additionally, the present home language exposure was measured only once and thus could not examine the extent to which changes in home language exposure influenced children's literacy and language skills. In general, research has measured language exposure levels during one time point without accounting for changes in home

language patterns over time (Mancilla-Martínez & Lesaux, 2011; Palermo et al., 2017). Future research could assess home language exposure levels through observational data collection and exposure levels at multiple time points.

The final limitation that is important to consider is that student's behavior was not collected. Fidelity of the study was collected through observation using a checklist. It is likely that some of the students were off task during the intervention period. Future research should include objective measures, such as direct observation of behavior. Although the study found encouraging evidence of the abbreviated peer-mediated intervention for EB students, more research in this area is necessary to confirm the preliminary findings.

Conclusion

The current study implemented an abbreviated classwide peer-mediated literacy intervention with 64 Spanish-Speaking EB students in second through fifth grade in a rural school district. Results indicated that students in the treatment condition improved on measures of Spanish oral reading fluency, bilingual receptive vocabulary, and English reading comprehension after a relatively brief time. The findings from the present study provides preliminary support for the usage of implementing abbreviated peer-mediated interventions as a Tier 1 approach for EB students. Therefore, it is highly encouraged educators place strong emphasis on providing high-quality Tier 1 instruction and intervention at the classwide for EB students. Future research is needed to determine what interventions should continue for EB students not showing progress in Tier 1 interventions, but given the promising results found in this study and the current needs to increase EB students' literacy and language skills, the additional research seems warranted.

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APPENDICES

APPENDIX A

Parent Survey

Parent Survey – English Form

Student name _____

Please go ahead and answer each question.

Demographics

Question 1: Is this child's biological mother Hispanic/Latina?

- Yes No

If yes, please indicate the ethnicity of this child's biological mother.

- Mexican American Mexican Puerto Rican Cuban
 Central or South American Other
-

Question 2: What is the race of this child's biological mother?

- African American, Black European American, White
 Native American, American Indian Asian, Pacific Islander, Middle Eastern
 Other Hispanic
-

Question 3: Is this child's biological father Hispanic/Latino?

- Yes No

If yes, please indicate the ethnicity of this child's biological Father.

- Mexican American Mexican Puerto Rican Cuban
 Central or South American Other
-

Question 4: What is the race of this child's biological father?

- African American, Black European American, White
 Native American, American Indian Asian, Pacific Islander, Middle Eastern
 Other Hispanic
-

Question 5: Is this child Hispanic/Latina?

- Yes No

If yes, please indicate the ethnicity of this child.

- Mexican American Mexican Puerto Rican Cuban
 Central or South American Other
-

Question 6: What is this child's race?

- African American, Black European American, White

- Native American, American Indian
- Other

- Asian, Pacific Islander, Middle Eastern
- Hispanic

Question 7: Please indicate if the following members of your family were born in the United States. (Pleasemark an “X” to each of the statements below)

	Yes	No
Your Child		
This child’s biological mother		
This child’s biological father		
This child’s maternal grandmother		
This child’s maternal grandfather		
This child’s paternal grandmother		
This child’s paternal grandfather		

Question 8: If you were not born in the U.S., how many years have you been living in the U.S.?

Your answer: _____

Question 9: Please bubble in the circle that best describes your total family income. Please include income from all sources.

- Under \$10,000 \$10,000-20,000 \$20,000-30,000 \$30,000-40,000 \$40,000-50,000
- \$50,000-60,000 \$60,000-70,000 \$70,000-80,000 \$80,000-90,000 \$90,000-100,000
- \$100,000-110,000 \$110,000-120,000 \$120,000-130,000 \$130,000-140,000 Over \$140,000

Question 10: What is the highest level of education that you have completed?

- Less than 12th grade vocational school High school graduate Some college Some graduate
- College graduate Graduate, professional school

Question 11: What is the highest level of education that your spouse has completed?

- Less than 12th grade vocational school High school graduate Some college Some graduate

- College graduate
- Graduate, professional school

Home Language Exposure Parent Survey

Question 1: What is the primary language spoken by the adults in the home where the child lives?

- only Spanish (solamente español)
- More Spanish than English (Más español que inglés)
- More English than Spanish (Más inglés que español)
- only English (solamente inglés)
- None of these options (Ninguna de estas opciones)

For following questions, please mark an “X” the box that corresponds to your answer:	Never	Sometimes	Most of the time	All of the time
1. How often does your child <u>HEAR</u> Spanish at home from his/her mother?				
2. How often does your child <u>HEAR</u> Spanish at home from his/her father?				
3. How often does your child <u>HEAR</u> Spanish at home from siblings/other family members?				
4. How often does your child <u>HEAR</u> Spanish at home from friends?				
5. How often does your child <u>HEAR</u> Spanish at home with other people outside of home and school?				
6. How often does the child <u>SPEAK</u> Spanish at home with his/her mother?				
7. How often does the child <u>SPEAK</u> Spanish at home with his/her father?				
8. How often does the child <u>SPEAK</u> Spanish at home with siblings/other family members?				
9. How often does the child <u>SPEAK</u> Spanish at home with friends?				
10. How often does the child <u>SPEAK</u> Spanish at home with other people outside of home and school?				

For following questions, please mark an “X” the box that corresponds to your answer:	Never	Sometimes	Most of the time	All of the time
11. How often does the child <u>HEAR</u> English at home from his/her mother?				
12. How often does the child <u>HEAR</u> English at home from his/her father?				
13. How often does the child <u>HEAR</u> English at home from siblings/other family members?				
14. How often does the child <u>HEAR</u> English at home from friends?				
15. How often does the child <u>HEAR</u> English at home with other people outside of home and school?				
16. How often does the child <u>SPEAK</u> English at home with his/her mother?				
17. How often does the child <u>SPEAK</u> English at home with his/her father?				
18. How often does the child <u>SPEAK</u> English at home with siblings/other family members?				
19. How often does the child <u>SPEAK</u> English at home with friends?				
20. How often does the child <u>SPEAK</u> English at home with other people outside of home and school?				

Encuesta para padres- Formulario en Español

Nombre de Estudiante _____

Por favor conteste cada pregunta lo mejor

que pueda. Demografía

Pregunta 1: ¿Es la madre biológica de este niño hispana/latina?

- Sí No

En caso afirmativo, sírvase indicar el origen étnico de la madre biológica de este niño.

- Mexicano-Americano Mexicano Puertorriqueño Cubano
 Centro o Sudamérica Otros

Pregunta 2: ¿Cuál es la raza de la madre biológica de este niño?

- Afroamericano, Negro Europeo Americano, Blanco Nativo americano, indio americano
 Asiático, isleño del Pacífico, Oriente Medio Otros Hispano

Pregunta 3: ¿Es el padre biológico de este niño hispano/latino?

- Sí No

En caso afirmativo, sírvase indicar el origen étnico del padre biológico de ese niño.

- Mexicano-Americano Mexicano Puertorriqueño Cubano
 Centro o Sudamérica Otros

Pregunta 4: ¿Cuál es la raza del padre biológico de este niño?

- Afroamericano, Negro Europeo Americano, Blanco Nativo americano, indio americano
 Asiático, isleño del Pacífico, Oriente Medio Otros Hispano

Pregunta 5: ¿Es este niño hispano/latino?

- Sí No

En caso afirmativo, sírvase indicar el origen étnico de este niño.

- Mexicano-Americano Mexicano Puertorriqueño Cubano
 Centro o Sudamérica Otros

Pregunta 6: ¿Cuál es la raza de este niño?

- Afroamericano, Negro Europeo Americano, Blanco Nativo americano, indio americano
 Asiático, isleño del Pacífico, Oriente Medio Otros Hispano

Pregunta 7: Por favor, indique si los siguientes miembros de su familia nacieron en los Estados Unidos. Marque un "X" en cada respuesta:

	Sí	No
Su hijo		
La madre biológica de este niño		
El padre biológico de este niño		
La abuela materna de este niño		
El abuelo materno de este niño		
La abuela paterna de este niño		
El abuelo paterno de este niño		

Pregunta 8: Si no naciste en los Estados Unidos, ¿cuántos años has estado viviendo en los Estados Unidos?

Su respuesta: _____

Pregunta 9: Por favor, burbujee en el círculo que mejor describa su ingreso familiar total. Por favor, incluya los ingresos de todas las fuentes.

- Under \$10,000
 \$10,000-20,000
 \$20,000-30,000
 \$30,000-40,000
 \$40,000-50,000
 \$50,000-60,000
 \$60,000-70,000
 \$70,000-80,000
 \$80,000-90,000
 \$90,000-100,000
 \$100,000-110,000
 \$110,000-120,000
 \$120,000-130,000
 \$130,000-140,000
 Over \$140,000

Pregunta 10: ¿Cuál es el nivel más alto de educación que ha completado?

- Menos de 12º grado
 Graduado de la escuela secundaria
 Alguna escuela vocacional
 Alguna universidad
 Graduado universitario
 Graduado, escuela profesional

Pregunta 11: ¿Cuál es el nivel más alto de educación que su pareja ha completado?

- Menos de 12º grado
 Graduado de la escuela secundaria
 Alguna escuela vocacional
 Alguna universidad
 Graduado universitario
 Graduado, escuela profesional

Encuesta de Padres sobre la Exposición al Idioma del Hogar

Pregunta 1: ¿Cuál es el idioma principal hablado por los adultos en el hogar donde vive el niño?

- only Spanish (solamente español)
 More Spanish than English (Más español que inglés)
 More English than Spanish (Más inglés que español)
 only English (solamente inglés)
 None of these options (Ninguna de estas opciones)

Para las siguientes preguntas, por favor marque “X” que corresponda a su respuesta:	nunca	a veces	la mayor parte del tiempo	todo el tiempo
1. ¿Con qué frecuencia su hijo <u>ESCUCHA</u> español en casa de su madre?				
2. ¿Con qué frecuencia su hijo <u>ESCUCHA</u> español en casa de su padre?				
3. ¿Con qué frecuencia su hijo <u>ESCUCHA</u> español en casa de hermanos / otros miembros de la familia?				
4. ¿Con qué frecuencia su hijo <u>ESCUCHA</u> español en casa de sus amigos?				
5. ¿Con qué frecuencia su hijo <u>ESCUCHA</u> español en casa con otras personas fuera de casa y la escuela?				
6. ¿Con qué frecuencia <u>HABLA</u> el niño español en casa con su madre?				
7. ¿Con qué frecuencia <u>HABLA</u> español el niño en casa con su padre?				
8. ¿Con qué frecuencia <u>HABLA</u> español el niño en casa con sus hermanos u otros miembros de la familia?				
9. ¿Con qué frecuencia <u>HABLA</u> el niño español en casa con amigos?				
10. ¿Con qué frecuencia el niño <u>HABLA</u> español en casa con otras personas fuera de casa y la escuela?				

Para las siguientes preguntas, por favor marque "X" que corresponda a su respuesta:	nunca	a veces	la mayor parte del tiempo	todo el tiempo
11. ¿Con qué frecuencia el niño <u>ESCUCHA</u> el inglés en casa de su madre?				
12. ¿Con qué frecuencia <u>ESCUCHA</u> el niño el inglés en casa de su padre?				
13. ¿Con qué frecuencia <u>ESCUCHA</u> el niño el inglés en casa de sus hermanos/otros miembros de la familia?				
14. ¿Con qué frecuencia <u>ESCUCHA</u> el niño el inglés en casa de sus amigos?				
15. ¿Con qué frecuencia <u>ESCUCHA</u> el niño el inglés en casa con otras personas fuera del hogar y la escuela?				
16. ¿Con qué frecuencia el niño <u>HABLA</u> inglés en casa con su madre?				
17. ¿Con qué frecuencia el niño <u>HABLA</u> inglés en casa con su padre?				
18. ¿Con qué frecuencia <u>HABLA</u> el niño inglés en casa con sus hermanos u otros miembros de la familia?				
19. ¿Con qué frecuencia <u>HABLA</u> el niño inglés en casa con amigos?				
20. ¿Con qué frecuencia el niño <u>HABLA</u> inglés en casa con otras personas fuera de casa y la escuela?				

APPENDIX B

Training



1



2



3



4



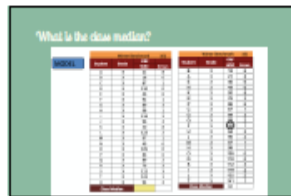
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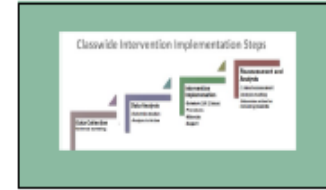
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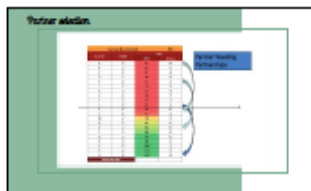
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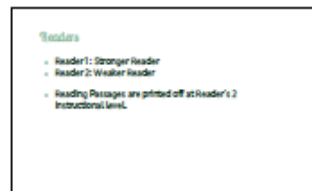
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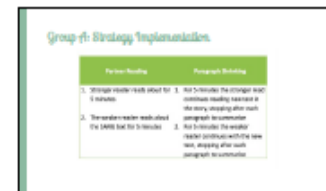
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17



18

Paragraph Striking

- NAME THE MOST IMPORTANT PART OF PARAGRAPHS
- TELL THE MOST IMPORTANT PARTS ABOUT THE PARAGRAPHS
- 15
- USE THE MARKERS IN AN ORDER OF USE

19

Error Corrections

CONSIDER PROBLEMS

- WHY DID YOU...
- WHY NOT...
- HOW DO YOU...
- HOW CAN YOU...

20

Group A: Partner Reading w/ Paragraph Striking

21

Group B students

Collect Data: Pre-Test

- Day 1: Train Group B students on setup procedures and partner reading
- Day 2: Practice Reading with partner for 10 minutes
- Day 3-10: Partner Reading 5-10 minutes every day

Collect Data: Post-Test

22

Materials

- Used Objects
- Partner Reading and Paragraph Striking rules
- Partner 2 passages

23

After the 2 weeks intervention

- After 2 weeks, the team will conduct the post-test to all students
- After all students have been assessed, Group A and B students will do the strategy

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03 Previous Studies

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3rd grade Partner Reading data

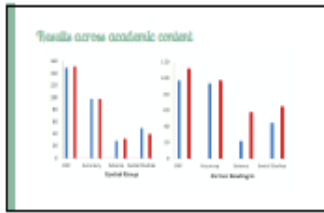
Class	Pre Intervention Class Mean (MWC)	Post Intervention Class Mean (MWC)	Slope (MWC)
Class 1	81	104	13.8
Class 2	97	122	14

26

Results

Student	Pre-Test	Post-Test
Student 1	85	100
Student 2	88	105
Student 3	90	110
Student 4	92	115
Student 5	95	120
Student 6	98	125
Student 7	100	130
Student 8	102	135
Student 9	105	140
Student 10	108	145
Student 11	110	150
Student 12	112	155
Student 13	115	160
Student 14	118	165
Student 15	120	170
Student 16	122	175
Student 17	125	180
Student 18	128	185
Student 19	130	190
Student 20	132	195
Student 21	135	200
Student 22	138	205
Student 23	140	210
Student 24	142	215
Student 25	145	220
Student 26	148	225
Student 27	150	230
Student 28	152	235
Student 29	155	240
Student 30	158	245
Student 31	160	250
Student 32	162	255
Student 33	165	260
Student 34	168	265
Student 35	170	270
Student 36	172	275
Student 37	175	280
Student 38	178	285
Student 39	180	290
Student 40	182	295
Student 41	185	300
Student 42	188	305
Student 43	190	310
Student 44	192	315
Student 45	195	320
Student 46	198	325
Student 47	200	330
Student 48	202	335
Student 49	205	340
Student 50	208	345
Student 51	210	350
Student 52	212	355
Student 53	215	360
Student 54	218	365
Student 55	220	370
Student 56	222	375
Student 57	225	380
Student 58	228	385
Student 59	230	390
Student 60	232	395
Student 61	235	400
Student 62	238	405
Student 63	240	410
Student 64	242	415
Student 65	245	420
Student 66	248	425
Student 67	250	430
Student 68	252	435
Student 69	255	440
Student 70	258	445
Student 71	260	450
Student 72	262	455
Student 73	265	460
Student 74	268	465
Student 75	270	470
Student 76	272	475
Student 77	275	480
Student 78	278	485
Student 79	280	490
Student 80	282	495
Student 81	285	500
Student 82	288	505
Student 83	290	510
Student 84	292	515
Student 85	295	520
Student 86	298	525
Student 87	300	530
Student 88	302	535
Student 89	305	540
Student 90	308	545
Student 91	310	550
Student 92	312	555
Student 93	315	560
Student 94	318	565
Student 95	320	570
Student 96	322	575
Student 97	325	580
Student 98	328	585
Student 99	330	590
Student 100	332	595

27



28

Practice

29

- Next Steps:
- Teacher Online or Paper survey
 - Reading Comprehension screeners to occur in the classroom
 - Model to students the strategy

30

- Conclusion
- 
- Compare Teachers and Parents
 - Analyze the data
 - Create a brief report
 - Present results

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Any Questions?



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Thanks!

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APPENDIX C

Intervention Fidelity Form

Intervention Fidelity Form

Date:
 School:
 Classroom Teacher:
 Observer:

PROCEDURES		
Yes	No	Students transition to partner spots quietly and efficiently
Yes	No	1 st reader reads for 5 minutes %90-100 of students on task
Yes	No	2 nd reader reads the <i>same</i> text for 5 min %90-100 of students on task
Yes	No	Teacher provides praise for on task work
Yes	No	1 st reader continues reading, shrinking each paragraph
Yes	No	Teacher listens to one or two students to listen for correct paragraph shrinking
Yes	No	2 nd reader continues reading, shrinking each paragraph
Yes	No	Teacher listens to one or two students for correct paragraph shrinking
Yes	No	Smooth transitions back to seats

VITA

Monica Romero received her bachelor's degree in Psychology and Sociology from the University of California-Santa Barbara in 2018 and her master's degree in School Psychology from the University of Missouri-Columbia in 2020. Monica was a bilingual paraeducator in a district with a large population of Spanish-speaking students who need intensive literacy and language support, a research assistant for studies examining academic achievement, and a bilingual consultant for the school district. In these roles she supported the biliteracy and bilingual development of elementary-aged children by implementing academic interventions. Her own personal background of being an Emergent Bilingual learner influenced her current research interests—students who are Latine and Spanish-speakers to support their literacy and language achievement and the role school psychologists play in the special education eligibility process for these students.