The Science of Reading for English Learners in New Mexico

A Review for the New Mexico Public Education Department

Linda Cavazos, PhD

November 2021 revised February 2025

Table of Contents

Introduction		
Background	3	
Reading Proficiency in the US		
Reading Proficiency in New Mexico	5	
Possible Reasons for Poor Reading Outcomes	6	
Structured Literacy in New Mexico Initiative		
The Science of Teaching Reading Research Base		
The Simple View of Reading	8	
Structured Literacy		
A Science of Reading for English Learners Framework		
Oral Language Development		
Assessment and English Learners	19	
Conclusion		
Key Takeaways		
References		

Introduction

The Science of Reading (SOR) for English literacy has been studied extensively, with ongoing debate about its effectiveness and appropriateness for diverse groups of students across grade levels. The research evidence is clear that the SOR is effective for English literacy for all students, including English learners (ELs). Less is known about the efficacy of the SOR for native language literacy and biliteracy. Although there is widespread understanding of the predictive relationship between oral language development and reading comprehension, implementation of explicit and systematic use of strategies to improve oral language and vocabulary need to be incorporated into daily instruction for ELs.

Student reading performance data document low reading proficiency for ELs and indicate a need for change to existing literacy and biliteracy practices and analysis of other possible reasons for low reading proficiency. Determining how to use the SOR with ELs in language assistance programs requires analyzing the essential components of reading in the native language (L1) and English, understanding oral language development and its complex components, and recognizing that ELs instructed in English are learning to read in a language they are simultaneously acquiring. A deeper understanding of the SOR and the research base that supports it will assist in developing a SOR for ELs framework that incorporates best practices for L1 and L2 literacy and biliteracy instruction for ELs across educational settings.

Background

Much has been written and debated about how to teach students to read and what constitutes scientific research that supports reading practices. This review will focus on the evidence base for teaching ELs to read in English, native language, and biliteracy contexts. Because New Mexico ELs are predominately from Spanish-speaking homes, this report will emphasize reading instructional practices for these students. The National Reading Panel (2000) underscored the five essential components of proficient reading: phonological awareness (PA), phonics, fluency, vocabulary, and comprehension. See Figure 1. These components develop at different time points (i.e., PA and phonics first) and sometimes simultaneously depending on where the student is on the continuum of reading development (Petscher et al., 2021).

The essential components of reading apply to both L1 and L2 literacy, although the instructional practices and time

Figure 1. Components of Reading



Source: Florida Center for Reading Research

spent teaching subskills may differ. For example, English and Spanish instruction in PA and phonics differs, with English instruction typically requiring more time and different strategies for teaching these skills. In English, which has an opaque and deep orthography, some lettersound combinations have a one-to-one correspondence, but many do not. Students must learn to decode words with letter-sound correspondence and must be taught how to decode words with irregular spellings, which may require more time to learn (Caravolas et al., 2013). The Spanish language, which has a transparent orthography, has a strong letter-sound correspondence that allows students to decode easily. These language differences affect reading accuracy and fluent word-reading skills (Ellis et al., 2004; Ziegler & Goswami, 2005) and the time spent teaching foundational reading skills (Petscher et al., 2021).

Early phonics instruction is important to both languages and provides the gateway to more complex multisyllabic and morphophonemic skills that improve reading with automaticity. To become skilled readers, students must develop automaticity and word recognition to allow cognitive energy to make sense of text and comprehension. Comprehensive federal reviews of effective reading instruction in the United States, United Kingdom, and Australia (National Reading Panel, 2000; Rose, 2006; Rowe, 2005) provide scientific consensus for phonics instruction in early learning (Castles et al., 2018).

Reading Proficiency in the US

Low reading performance trends have been documented in the United States across a span of nearly 30 years, with achievement gaps noted for subpopulations of students (e.g., ELs, Hispanic, Black, American Indian, and students from poverty) when compared to White students (Hussar et al., 2020). In 2019, 34% of 4th-grade students did not meet basic reading proficiency standards on the National Assessment of Educational Progress (NAEP) conducted in English (Hussar et al., 2020). This percentage has not changed much since 1992, when 38% of 4th-grade students met basic reading proficiency levels (Hussar et al., 2020). English reading proficiency outcomes for 4th-grade ELs were 33 points lower than non-ELs in 2019 (Hussar et al., 2020). Similar reading performance trends were reported for 8th-grade and 12th-grade ELs, who scored 45 points and 49 points lower than non-ELs, respectively (Hussar et al., 2020).

NAEP reading proficiency trends for the last 25 years indicate a reading crisis in the United States affecting a third of the nation's students and disproportionately affecting ELs and other subgroups. The NAEP assessment is conducted in English, a language ELs are simultaneously learning to speak and understand and in which they are not yet proficient. Therefore, NAEP results for ELs must be interpreted in relation to their language proficiency levels and language(s) of instruction. A recommended practice is to assess ELs in English and the native language for a more accurate understanding of their reading achievement (Hopewell & Escamilla, 2014; Ortiz et al., 2018). In addition, ELs' oral language proficiency in L1 and L2 should be assessed regularly and used with reading assessment data to inform language and literacy instruction (Cavazos & Ortiz, 2020).

Reading Proficiency in New Mexico

New Mexico data document low reading proficiency levels and entrenched achievement gaps between ELs and their non-EL peers. New Mexico 2019 NAEP data indicate that New Mexico students had the lowest performance of all states (NCES, 2019). A trend of consistently low NAEP reading scores has characterized New Mexico schools and is confirmed by other measures. Table 1 illustrates New Mexico 2019 reading achievement data for English and Spanish standardized accountability assessments on NAEP, Partnership for Assessment of Readiness for College and Careers (PARCC), and Spanish Reading Standards Based Assessment (SBA). PARCC reading proficiency data indicate that only 34% of all New Mexico students and 15% of ELs scored at or above the proficient level in 2019 (NMPED). Results for the Spanish reading assessment indicate that only one-quarter of ELs in New Mexico are at or above proficient in Spanish.

READING ASSESSN	ΛΕΝΤ	% At or Above Proficiency Level	% Below Proficiency Level
NAEP	NM - 4th grade students	24	76
	NM - 4th grade ELs	7	93
PARCC	NM all students	34	66
	NM ELs	15	85
SBA Spanish	NM ELs	26	74

Table 1. New Mexico 2019 Reading Achievement Data

Source: NM PED 2021, Nations Report Card 2019

The data from state assessments indicate an urgent need for change in literacy practices for New Mexico students and ELs.

Possible Reasons for Poor Reading Outcomes

Low reading proficiency in the United States may reflect limited teacher knowledge of the SOR (Aro & Björn, 2016; Fielding-Barnsley, 2010; Hurry et al., 2005; Moats, 2009). This suggests that teacher preparation programs do not provide preservice teachers with in-depth knowledge of the SOR (Castles et al., 2018) and do not adequately prepare them to teach reading (Buckingham et al., 2013; Castles et al., 2018; Seidenberg, 2017). Poor outcomes may also reflect a lack of effective and efficient instruction, including inadequate time for phonics and comprehension instruction, opportunities to practice, or failure to use a scope and sequence (Duke & Mesmer, 2019).

Critics of the SOR offer other reasons for poor reading outcomes. They argue that phonics instruction alone does not lead to skilled reading and that using decodable books limits reading development because of the absence of authentic, meaningful text (Blevins, 2017; Calkins, 2020). They also raise concerns that Structured Literacy does not address the multidimensional nature of reading, that some students do not need phonics instruction, and that the approach does not encourage teachers to individualize reading to the interests, experiences, and abilities of students (Compton-Lily et al., 2020).

In response to these critiques, it is important to note that the SOR approach recommends phonics instruction through decodable books for development of early reading skills, but it also recommends broad reading across reading genres using interesting and authentic text (i.e., informational text to develop skilled reading, world knowledge, and increased academic vocabulary). In addition, differentiated, diagnostic, and responsive instruction are components of a SOR approach, indicating that instruction is individualized to the abilities and needs of the student based on data. Students' background knowledge and interests are incorporated into SOR instruction.

Reading practices in the United States for ELs must be examined to change their reading trajectories and to advance their oral language and development. The SOR must be carefully reviewed to determine how it applies to reading instruction for ELs and to identify additions to, or modification of, SOR principles to ensure the SOR addresses ELs' unique language and reading needs in L1 and L2.

ELs are not a heterogeneous group; some are immigrants (entering preschool while others are older students who may have gaps in formal schooling), some are born in the US, and some are simultaneous bilinguals. Each group has different literacy and language needs; therefore, language programs, instruction, training, and resources must match the needs of the students. The key is to determine what reading practices work for whom, under what circumstances, and to apply the best available research evidence systematically in L1 and L2 to ensure improved reading outcomes for all students, including ELs.

Structured Literacy in New Mexico Initiative

In 2020, the New Mexico Public Education Department (NMPED) used the SOR evidence base for changes in literacy practices by launching a state-wide literacy initiative, Structured Literacy New Mexico, based on the science of teaching reading approach. This initiative is focused on identifying struggling readers before they fail and supporting teachers through the SOR and Structured Literacy (NMPED, n.d.). The goal is to increase the number of students reading at or above grade level and reduce the number of students requiring reading intervention or special education services. The initiative centers reading instruction in Structured Literacy (IDA, 2014), a SOR approach to instruction with a strong research base.

The Science of Teaching Reading Research Base

The SOR is the research and accumulated knowledge supporting best reading development practices and instructional practices (Petscher et al., 2020). The SOR research base can be found in the Institute of Education Sciences What Works Clearinghouse practice guides (Baker et al., 2014; Foorman et al., 2016; Gersten et al., 2007, 2008; Kamil et al., 2008; Shanahan et al., 2010) and in other metanalyses (Berkeley et al., 2012; Ehri et al., 2001a; Ehri et al., 2001b; NELP, 2008; Therrien, 2004; Wanzek et al., 2013, 2016).

The Simple View of Reading

The Simple View of Reading (SVR) asserts that reading is the product of decoding (word recognition) and linguistic comprehension (R = D x C) or "the process by which, given lexical (i.e., word) information, sentences and discourses are interpreted" (Gough & Tunmer, 1986, p. 7). According to the SVR, decoding (word recognition) translates print into language, and linguistic comprehension makes sense of the written words (Catts et al., 2006). Both skills are necessary components of skilled reading and predictors of reading comprehension (Foorman et al., 2015; Kershaw & Schatschneider, 2012; Lonigan et al., 2018; Sabatini et al., 2010; Vellutino et al., 2007). Figure 2 shows Scarborough's Reading Rope (2001) and visually represents how

word recognition and language comprehension contribute to skilled reading. The strands strengthen as skilled reading develops. Linguistic comprehension becomes increasingly strategic, and word recognition (decoding) becomes increasingly automatic as reading subskills develop.

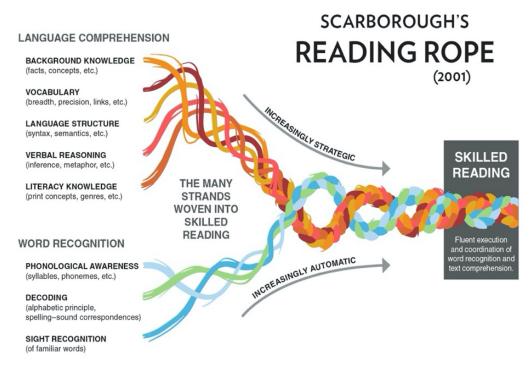


Figure 2. Scarborough's Reading Rope

The SVR provides a widely used framework with a strong research base for reading development across age groups (Catts et al., 2006; Garcia & Cain, 2014; Kendeou et al., 2009; Kim, 2017; Lonigan et al., 2018; LRRC, 2015; LRRC & Chu, 2018; Snow, 2002). In a meta-analysis of the effectiveness of SVR in 23 studies of reading in many languages, including those with transparent orthographies (e.g., Spanish, Dutch, Greek, Italian), Florit and Cain (2011) found SVR is effective across language and age groups. They also found that decoding fluency was more predictive of reading comprehension than was decoding accuracy in transparent orthographies, likely because letter-sound correspondences are highly predictable in these

Source: Scarborough, 2001

languages and easier to acquire (Ellis et al., 2004: Florit & Cain, 2011). They recommend that the decoding component must consider the transparency of the orthography when using SVR.

Decoding

The SOR emphasizes explicit instruction of both decoding and comprehension skills. Decoding involves understanding the alphabetic principle and spelling-sound correspondences. The SOR promotes an explicit phonics approach for teaching letters and sounds (Castles et al., 2018) to understand how the written code and language contribute to reading development (Moats, 2007; Petscher et al., 2020; Seidenberg, 2017). Teaching phonics well in the primary grades consistently provides students with a learning advantage (Shanahan, 2020). Research supports the importance of explicit instruction in early reading (Baker et "Research al., 2010; Connor et al., 2009; Elbaum et al., 1999, 2000; supports the Gersten et al., 2007, 2008; Gunn et al., 2010; Kirschner et al., *importance of* 2006; Taylor et al., 1999; Thurlow et al., 1993; Vaughn et al., explicit instruction 2003). Students must be explicitly taught to develop phonological awareness and phonics in English (Foorman et in early reading." al., 2016; Lane et al., 2007; Savage et al., 2009), decode words, recognize common word parts, encode, and recognize words automatically (Coyne et al., 2004;

Knowledge of early literacy skills, print knowledge, phonological awareness, alphabetic principle, and morphophonemic awareness are needed for accurate and efficient decoding (Ehri, 2005; Perfetti, 2007; Wagner & Torgesen, 1987; Wagner et al., 1994; Lonigan et al., 2009; Lonigan et al., 1998; National Early Literacy Panel, 2008; Whitehurst & Lonigan, 1998) and later word recognition skills (Catts et al., 2015). Phonics knowledge provides a critical foundation for reading, but more than just alphabetic skills are needed to develop skilled reading (e.g., automaticity, advanced word recognition without relying on letters and sounds, and writing development, Castles et al., 2018). There is a progression to literacy development with phonemic awareness, phonics, alphabetic principle, and decoding skills supporting the

Fien et al., 2020b; Foorman et al., 2016; Gunn et al., 2010; Stanovich, 1990; 1991).

development of fluency, vocabulary, and comprehension.

Language Comprehension

A well-developed language system sets the foundation for early decoding skills and reading comprehension. ELs need to develop oral language skills that support reading (e.g., age-appropriate listening and speaking skills, depth of vocabulary knowledge, ability to create personal narratives and to understand the narratives of others and those encountered in text, and ability to communicate effectively in social and academic contexts). Many cognitive processes used for reading comprehension are aspects of language comprehension (e.g., word recognition and lexicon, Castles & Nation, 2018).

Language skills are essential to listening comprehension, vocabulary development, word recognition, and reading comprehension. Petscher et al. (2021) highlight studies that demonstrate practices for language development, such as increasing children's language use and dialog with peers and the teacher in the classroom (Cabell et al., 2015; Dickinson & Porche, 2011; Lonigan et al., 2011; Wasik & Hindman, 2018) and integrating content area and early literacy instruction (Connor et al., 2017; Gonzalez et al., 2011; Kim et al., 2020; Williams et al., 2014).

Background Knowledge

ELs bring valuable background knowledge to classrooms. Teachers should begin by becoming familiar with the students' funds of knowledge. They can integrate these funds into instruction and build new knowledge on what students know or fill in content they have not been exposed to. Understanding and tapping into ELs' linguistic and cultural assets helps them learn. A student's background knowledge contributes to their text comprehension (Anderson & Pearson,

"reading informational text contributes to knowledge building and vocabulary"

1984; Cromley & Azevedo, 2007; Ozuru et al., 2009); therefore, building background knowledge and an expansive vocabulary can improve comprehension of text (Cabell & Hwang, 2020;

Hwang et al., 2019). Wide reading, independent, shared, and read-alouds, with an emphasis on reading informational texts, contribute to knowledge building and vocabulary development (Guthrie Anderson, 1999; Sparks et al., 2014; Stanovich, 1986; Stanovich & Cunningham, 1993). Learning to read requires strategically selected high-quality instructional materials and highly qualified teachers.

Structured Literacy

Structured Literacy (IDA, 2014) is an effective SOR approach for teaching reading with a strong research base (Brady, 2011; Fletcher et al., 2007; Foorman et al., 2016; National Reading Panel, 2000; Spear-Swelling, 2019). Structured Literacy addresses both oral and written language skills in an explicit, systematic manner by incorporating phoneme awareness (understanding the individual sounds in words), sound-symbol (phoneme-grapheme) correspondences, letter patterns, and conventions of print (orthography), morphology (affixes, roots, and base words), syntax (word order in sentences), and semantics (meaning of language; Moats, 2019). Structured Literacy integrates explicit, systematic, cumulative, hands-on, engaging, multimodal, diagnostic, and responsive strategies into reading instruction (Moats, 2019).

Structured Literacy addresses components of oral language, including phonology, morphology, semantics, syntax, discourse, and pragmatics at every level of reading development. Pragmatic language includes the ability to use language for different purposes, including understanding both the social and academic registers of the language and using language appropriately across many contexts.

The language comprehension component is much more than listening comprehension. Phonology and morphology are essential aspects of phonics instruction and essential components of oral language development and instruction. Phonology involves the speech sounds in language, and morphology consists of the structure of words. Table 2 shows the essential components of Structured Literacy oral language comprehension (Spear-Swerling, 2016).

12

Table 2. Oral Language in Structured Literacy

Component	Description
Phonology	Aspect of language that involves speech sounds
Morphology	Aspect of language that involves word parts that carry meaning
Semantics	Aspect of language involving meaning, especially at the word level and beyond
Syntax	Aspect of language involving grammar and word order (sentence level)
Discourse	Aspect of language beyond the sentence level (i.e., passages and lengthy discussions of texts)
Pragmatics	Aspect of language involving understanding and use of language in a social context

Source: Adapted from Spear-Swerling, 2016

Structured Literacy Principles

Explicit instruction involves clearly explaining and modeling reading skills and providing examples coupled with opportunities for guided and independent practice so students fully understand the concepts (Moats, 2019). Systematic and cumulative instruction is teaching and explaining how pieces fit into the whole using a scope and sequence for instruction moving from easier to more complex concepts (Moats, 2019). Each concept builds on the other in reading development. Early literacy instruction includes hands-on, engaging, and multimodal instruction (Moats, 2019). Manipulatives and gestures are used to teach and provide practice with reading foundational skills and build memory through application and associations (Moats, 2019). Incorporating the four language domains through multimodal instruction supports language learning (Moats, 2019). The teacher continuously monitors, diagnoses, and responds to students' learning and responses and can adjust instruction as needed (Moats, 2019).

A Science of Reading for English Learners Framework

In a review of the SOR for ELs, Nogueron (2020) states that the current SOR practices for English literacy are not enough for ELs and suggests that the knowledge base about and best practices for ELs be incorporated into their instructional programming. ELs can use translanguaging or flexible language, sometimes referred to as codeswitching, to help them derive meaning from text, contrast languages, and develop language for academic contexts (Nogueron, 2020). Comparing and contrasting languages through syntactical and contextual analysis helps ELs deepen language knowledge (Nogueron, 2020).

Drawing attention to language similarities and differences and making crosslinguistic connections is an important component of biliteracy instruction (Cardenas-Hagan et al., 2007; Escamilla et al., 2014). Metalanguage, or making connections between two languages, enables students to leverage language to express meaning (Escamilla et al., 2014). In biliteracy contexts, metalanguage development includes intentional pre-planned opportunities to compare languages through bidirectional analyses (Escamilla et al., 2014). Teachers need expertise in "orthographic, phonemic, semantic, and alphabetic similarities and differences between L1 and L2" to support "development and transfer of skills across languages"(Cardenas-Hagan et al., 2007, p. 256). Making metalinguistic connections supports biliteracy development.

Holistic assessment is a recommended practice for ELs. Assessing in the native language and English and comparing the results "provides a fuller and more robust picture of a student's achievement" (Hopewell & Escamilla, 2014, p. 74). Interdisciplinary collaboration is needed to design a framework incorporating the most effective strategies for ELs in different program models. Interdisciplinary discussions about effective SOR literacy practices for bilingual education, dual language education, and English language development must occur to design an effective SOR for ELs framework.

ELs in New Mexico are instructed in various bilingual multicultural education programs (BMEPs). Determining what components of the SOR work for ELs in different BMEPs is critical to effective literacy instruction for ELs in New Mexico. The Structured Literacy New Mexico initiative is the cornerstone of literacy instruction for all students in New Mexico and a good

14

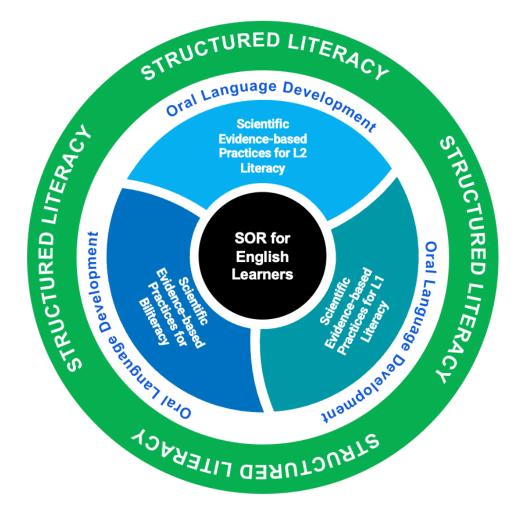
foundation for development of a SOR for ELs framework. The framework must be augmented with Spanish and biliteracy research-based practices congruent with Structured Literacy and should not contradict proven SOR practices that work for ELs. Specific use of Spanish literacy or biliteracy researchbased practices will differ across programs. The approach to early reading subskill development (i.e., phonological awareness and phonics) for Spanish literacy differs from English literacy, and instructional differences are expected.

"The Structured Literacy New Mexico initiative is the cornerstone of literacy instruction for all students in New Mexico"

What should be constant is the use of a Structured Literacy approach to instruct ELs in all BMEPs for English literacy and components of Spanish literacy. For example, in the areas of oral language development, fluency, vocabulary, and decoding, the same Structured Literacy approach can be used for reading instruction in both languages. Each BMEP has the goal of EL English proficiency and should align English reading instruction with this approach.

SOR foundational skill instruction in English reading is the same for ELs and non-ELs. Still, ELs need more, including systematic English oral language development and language support for English literacy development (Goldenberg, 2020). Figure 3 illustrates the essential components of a SOR for ELs framework. It shows how combining what we know works for English literacy for ELs from the expansive SOR knowledge base, with the knowledge base on native language literacy (i.e., Spanish) and biliteracy instruction and weaving in oral language development instruction in L1 and L2 throughout are critical components of the framework. Drawing on what the evidence base suggests for L1 and L2 literacy and biliteracy will add to the knowledge base for SOR for ELs, resulting in a dynamic and evolving body of research that supports improved academic outcomes.

Figure 3. Science of Reading for English Learners Framework



Garcia and colleagues (2008) and Castro et al. (2014) offer some recommended effective practices for equitable education for ELs:

- "Use the native language to develop higher cognitive and achievement levels (Castro et al., 2014).
- Incorporate translanguaging to allow dynamic use of linguistic repertoires to make meaning (Sanchez et al., 2018).
- Provide rigorous, high-quality instruction using high-quality materials and technology that leverages the home language(s) and the culture(s) of ELs
- Ensure that all educators and leaders serving ELs are well-versed in effective bilingual

instruction.

- Broaden the view of parental involvement to achieve mutual engagement in bilingual education (Perez Carreon et al., 2005).
- Maintain consistent routines and classroom organization so ELs can engage and follow instruction while socially integrating (Castro et al., 2014).
- Create language literacy-rich classrooms using supportive methods: visual aids, gestures, emphasis, and repetition to ensure that instruction is comprehensible.
- Adopt a curriculum that provides concrete examples to help ELs actively participate.
- Use strategies associated with oral language development (e.g., extended talk on a single topic, opportunities to dialog with teachers, exposure to advanced vocabulary, and cognitively challenging group discussions (Dickinson et al., 2009, 2011).

In a recent review of the use of the SOR for ELs within the context of English literacy, Goldenberg (2020) drew several conclusions:

- "Effective literacy instruction for non-ELs is the foundation of effective literacy instruction for ELs. However, attention must be paid to students' English oral language proficiency.
- 2. Relevant English oral language development instruction and opportunities must be explicitly and systematically planned and carried out.
- 3. Programs must explicitly teach the foundations of literacy and the skills and knowledge required for continued literacy development and provide adequate English-language support for literacy instruction.
- 4. Culturally appropriate instruction should not be prioritized over English oral language development and literacy skills [because] it lacks the empirical base to justify prioritizing it over English oral language development or any of the instructional and curricular factors" (p. S139-140).

Goldenberg recommends that the highest priority should be given to programs that accelerate development of oral language proficiency and academic language, the most critical skills ELs need for school success in English literacy (2020). The best conditions for instructing ELs require

a language-rich context, using a variety of literacy genres, flexible grouping structures, and use of a variety of research-based strategies (Figueroa, 2002) to support students' individual and group needs.

Oral Language Development

Oral language plays a central role in reading development regardless of the language. Preschool oral language skills and linguistic backgrounds are associated with reading comprehension in the primary grades (Castles & Nation, 2018; Catts et al., 2015; LRRC & Chiu, 2018; Mancilla-Martinez & Lesaux, 2010; Storch & Whitehurst, 2002; Verhoeven & Van Leeuwe, 2008). Children who enter school with or develop strong oral language skills during the preschool years have an essential foundation for reading development (Storch & Whitehurst, 2002), while those who do not have well-developed oral language skills are at-risk of reading difficulties or failure (Catts et al., 2006).

Studies have found that a strong English oral language development component is needed to support English literacy development (Ehri et al., 2007; NASEM, 2017; Saunders et al., 2006; Tong et al., 2008; Vaughn et al., 2006). In one study, Ehri and colleagues (2007) enhanced literacy instruction with English oral language support and found positive results for ELs and language minority students who were not classified as ELs (Ehri et al., 2007). As ELs achieve higher English proficiency levels, they become more skilled readers (Goldenberg, 2020; Li & Clariana, 2019).

Oral language development is vital for skilled reading for all students, but for ELs learning to read in English, a greater emphasis on oral language development is needed to develop word knowledge (SVR) as reading language demands increase through the grades (Goldenberg, 2020; Raudszus et al., 2019). Oral language development should be an integral part of language and literacy instruction for ELs "Oral language development should be an integral part of language and literacy instruction for ELs." because many are not developing English language proficiency at the expected rates to succeed in school, on average six years (Collier & Thomas, 2017). As many as 25%-40% of ELs are considered long-term ELs, meaning they did not reach English proficiency from school entry to middle or high school, placing them at greater risk of school failure and poor academic outcomes (Saunders & Marcelletti, 2013; Umansky & Reardon, 2014).

Assessment and English Learners

It is essential to consider what makes a valid and reliable assessment. Some considerations include whether ELs were represented in the norming samples, if the assessments were validated for ELs, if the assessments are available in L1, and if the students are taught in L1. Consider whether L1 assessments are routinely available, valid, and reliable for ongoing reading assessment and progress monitoring. Assessments administered in English are primarily a measure of language. Therefore, assessing ELs who have not mastered the language yet is invalid without disentangling academic language proficiency from content proficiency (Garcia et al., 2008).

Similar arguments are made about reading progress benchmarks used for ELs that were developed for non-ELs because they provide inaccurate data and numerous false positives on ELs' performance (Hopewell & Escamilla, 2014; Torgesen, 1998). Therefore, assessments for ELs should be validated for them and have equivalent versions in L1 and L2 to determine what students know within and across languages (Ortiz et al., 2018). Mancilla-Martinez and colleagues caution that even when ELs are assessed in L1 and L2, the measures themselves were developed for monolingual speakers in each respective language, which can lead to a limited view of students' full linguistic knowledge (2019).

Hopewell and Escamilla (2014) recommend assessing ELs in L1 and L2 to determine reading achievement through a paradigm of holistic bilingualism where credit is given for both languages. Regular oral language proficiency assessment should also be conducted in L1 and L2. "Linguists and researchers increasingly concur that assessing each language independently underestimates the language proficiency(ies) of English Learners" (Cavazos & Ortiz, 2020, p. 340).

ELs' oral language and reading performance should be assessed regularly and simultaneously to determine progress and to plan language and literacy instruction regardless of the language instructional educational program (Cavazos & Ortiz, 2020). Data from different reading assessments and multiple data points from the various assessments should be considered when making instructional decisions about ELs. Patterns of progress across assessments, formative and summative, are helpful for planning instruction.

Incorporating oral language assessment into literacy frameworks for ELs is critical to assessing language and literacy development (Cavazos & Ortiz, 2020). The National Academies of Sciences, Engineering, and Medicine (2017) recommend that oral language development be included as an outcome measure for research studies that include ELs. Adding this rigorous measure to EL studies will strengthen study findings and add to the SOR for ELs' knowledge base.

Conclusion

Although less is known about the use of the SOR for ELs, there are things we do know from both research and practice. It is important to incorporate effective research-based literacy practices for ELs in the native language and English as a second language instruction. Some English SOR practices will be implemented in concert with best practices for biliteracy development (e.g., translanguaging, metalanguage connections, holistic assessment) for biliteracy contexts. Translanguaging allows ELs to use all their bilingual repertoires to negotiate meaning (Garcia-Mateus & Palmer, 2017) and to strategically use two languages to communicate and support learning (Ortiz et al., 2018). Capitalizing on native language skills to support English development is an effective component of biliteracy instruction, leading to higher social, cognitive, and literacy achievement (Bialystok, 2007; Collier & Thomas, 2004; Garcia et al., 2008). Other biliteracy strategies with a proven research base will be incorporated into the SOR for ELs framework to ensure improved instruction across instructional programs.

We need to identify what works best for which ELs. The research indicates that skilled reading requires both orthographic and phonological skills (Deheane, 2011) and that an explicit SOR approach to reading instruction supports all students, including ELs, those who struggle, and students with special needs. Yet, we also know that gaps exist in the literature on using the SOR with ELs in biliteracy contexts. Given the importance of oral language development to comprehension and reading success, improving oral language and vocabulary in the native language and English is crucial to ELs' success. Oral language development is the strongest predictor of ELs' skilled reading development and requires explicit instruction. ELs will require more than just the SOR approach used in English settings. Collectively, teachers of ELs must use the best available evidence to provide the most effective instruction to reverse the persistent trend of low reading proficiency among ELs.

ELs need explicit and systematic instruction in decoding with ample opportunities to read and listen to strong reading models (e.g., read aloud) across various genres. They must develop their oral language and linguistic comprehension through dialog with students and adults to build their knowledge about diverse topics. These skills should also be explicitly taught to help ELs develop broad academic, instructional, and social vocabulary so they become skilled readers and thinkers. Therefore, strategic and purposeful attention must be given to developing ELs' oral language and building world knowledge on a variety of topics so that they can become skilled readers who comprehend the text they read and who are motivated to explore independent reading because they enjoy reading. In addition, SOR instruction for ELs requires careful attention to metalanguage and crosslinguistic transfer between the native language and English, as well as competent teachers who use culturally and linguistically responsive instruction and differentiate instruction for language and literacy. Because reading achievement patterns develop early for all learners (Baker & Smith, 1999; Good et al., 1998; Stanovich, 1986), including ELs, it is imperative to respond to these patterns and learning gaps with evidence-based practices and differentiated instruction to reverse early depressed

21

learning trajectories and improve student outcomes (Connor et al., 2011; Hernandez, 2011). Using the SOR evidence-based practices coupled with best practices for L1 and biliteracy instruction, such as rigorous oral language development, metalanguage strategies, and holistic assessment, is necessary to impact early learning trajectories and provide a quality, equitable education for ELs.

Teachers need access to the substantive knowledge base on the SOR. They need support in reviewing research results and strategies and tools to implement research-based practices with students to support improved student achievement. They need high-quality culturally and linguistically responsive instructional materials that promote research-based practices and offer guidance on differentiation and small group instruction. Teachers also need high-quality professional learning opportunities that include practical instructional strategies and tools garnered from evolving SOR for ELs' research to refine and adjust their instructional practices based on new SOR for ELs' evidence.

A combined effort from English literacy, native language literacy, and biliteracy educators and researchers is required to improve the reading outcomes of ELs. Fien et al. (2021a) state, "The field must exercise humility when representing the evidence base and be transparent when gaps in the literature exist" (p. S115). One unilateral approach will not work for ELs. Therefore, we must draw from the evidence base on relevant fields for validated practices supported by rigorous research to

"The field must exercise humility when representing the evidence base and be transparent when gaps in the literature exist."

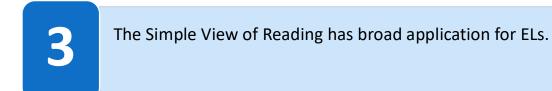
add to the knowledge base for the SOR for ELs. The SOR evidence-based practices are vital to wide-ranging improvements and transformative change in student reading achievement. The absence of the SOR evidence-based practices for instruction with ELs will result in continued underperformance and disparate and inequitable education, perpetuating the achievement gap between ELs and English-only students.

Key Takeaways

A SOR framework for ELs is needed to address their language and literacy needs across BMEPs.



Structured Literacy is an effective approach for biliteracy development when linguistic supports and enhanced oral language development are added.





Oral language development is the strongest predictor of ELs' skilled reading development and requires explicit instruction.



Attention to metalanguage, translanguaging, and holistic assessment is critical to effective biliteracy instruction for ELs.

References

- Anderson, R. C., & Pearson, P. D. (1984). A schema-theoretic view of basic processes in reading comprehension. In Pearson PD, Barr R, Kamil ML, & Mosenthal P (Eds.), *Handbook of Reading Research* (1st ed., pp. 255–291). Longman.
- Aro, M., & Björn, P. M. (2016). Preservice and inservice teachers' knowledge of language constructs in Finland. *Annals of Dyslexia*, 66, 111–126.
- Artiles, A. J., & Ortiz, A. A. (Eds.). (2002). English language learners with special education needs: Identification, assessment, and instruction. Center for Applied Linguistics and Delta System.
- Baker, S. K., & Smith, S. (1999). Starting off on the right foot: The influence of four principles of professional development in improving literacy instruction in two kindergarten programs. *Learning Disabilities Research & Practice*, *14*(4), 239–253.
- Baker, S. K., Fien, H., & Baker, D. L. (2010). Robust reading instruction in the early grades:
 Conceptual and practical issues in the integration and evaluation of Tier 1 and Tier 2 instructional supports. *Focus on Exceptional Children*, 42(9), 1–20.
- Baker, S., Lesaux, N., Jayanthi, M., Dimino, J., Proctor, C. P., Morris, J., ... & Newman-Gonchar,
 R. (2014). Teaching Academic Content and Literacy to English Learners in Elementary and
 Middle School. IES Practice Guide. NCEE 2014-4012. What Works Clearinghouse.
- Berkeley, S., Scruggs, T. E., & Mastropieri, M. A. (2010). Reading comprehension instruction for students with learning disabilities, 1995—2006: A meta-analysis. *Remedial and Special Education*, 31(6), 423-436.
- Bialystok, E. (2007). Acquisition of literacy in bilingual children: A framework for research. Language Learning, 57, 45–77.
- Blevins, W. (2016). A Fresh Look at Phonics: Common Causes of Failure and 7 Ingredients for Success. Corwin.
- Brady, S. A. (2011). Efficacy of phonics teaching for reading outcomes: Indications from post-NRP research.
- Buckingham, J., Wheldall, K., & Beaman-Wheldall, R. (2013). Why Jaydon can't read: The triumph of ideology over evidence in teaching reading. *Policy*, *29*(3), 21–32.
- Cabell, S. Q., Justice, L. M., McGinty, A. S., DeCoster, J., & Forston, L. D. (2015). Teacher–child conversations in preschool classrooms: Contributions to children's vocabulary development. *Early Childhood Research Quarterly*, 30, 80-92.
- Cabell, S. Q., & Hwang, H. (2020). Building content knowledge to boost comprehension in the primary grades. *Reading Research Quarterly*, 55, S99-S107.
- Calkins, L. (2020). No one gets to own the term "the science of reading".
- Caravolas, M., Lervåg, A., Defior, S., Seidlová Málková, G., & Hulme, C. (2013). Different patterns, but equivalent predictors, of growth in reading in consistent and inconsistent orthographies. *Psychological Science*, *24*(8), 1398-1407.
- Cárdenas-Hagan, E., Carlson, C. D., & Pollard-Durodola, S. D. (2007). The cross-linguistic transfer of early literacy skills: The role of initial L1 and L2 skills and language of instruction.
- Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, *19*(1), 5–51.

- Catts, H. W., Adlof, S. M., & Weismer, S. E. (2006). Language deficits in poor comprehenders: A case for the simple view of reading.
- Catts, H. W., Herrera, S., Nielsen, D. C., & Bridges, M. S. (2015). Early prediction of reading comprehension within the simple view framework. *Reading and Writing*, *28*(9), 1407-1425.
- Cavazos, L. O., & Ortiz, A. A. (2020). Incorporating oral language assessment into MTSS/RTI frameworks: The potential of personal narrative assessment. *Bilingual Research Journal*, *43*(3), 323-344.
- Collier, V. P., & Thomas, W. P. (2004). The astounding effectiveness of dual language education for all. *NABE Journal of Research and practice*, *2*(1), 1-20.
- Collier, V. P., & Thomas, W. P. (2017). Validating the power of bilingual schooling: Thirty-two years of large-scale, longitudinal research. *Annual Review of Applied Linguistics*, *37*, 203-217.
- Compton-Lilly, C. F., Mitra, A., Guay, M., & Spence, L. K. (2020). A confluence of complexity: Intersections among reading theory, neuroscience, and observations of young readers. *Reading Research Quarterly*, *55*, S185-S195.
- Connor, C. M., Morrison, F. J., Schatschneider, C., Toste, J., Lundblom, E., Crowe, E. C., & Fishman, B. (2011). Effective classroom instruction: Implications of child characteristics by reading instruction interactions on first graders' word reading achievement. *Journal of Research on Educational Effectiveness*, 4(3), 173–207.
- Connor, C. M., Piasta, S. B., Fishman, B., Glasney, S., Schatschneider, C., Crowe, E., ... Morrison, F.J. (2009). Individualizing student instruction precisely: Effects of Child × Instruction interactions on first graders' literacy development. *Child Development*, *80*(1), 77–100.
- Connor, C. M. D., Dombek, J., Crowe, E. C., Spencer, M., Tighe, E. L., Coffinger, S., ... Petscher, Y. (2017). Acquiring science and social studies knowledge in kindergarten through fourth grade: Conceptualization, design, implementation, and efficacy testing of content-area literacy instruction (CALI). *Journal of Educational Psychology*, *109*(3), 301–320.
- Coyne, M. D., Simmons, D. C., Kame'enui, E. J., & Stoolmiller, M. (2004). Teaching vocabulary during shared storybook readings: An examination of differential effects. *Exceptionality*, *12*(3), 145–162.
- Cromley, J. G., & Azevedo, R. (2007). Testing and refining the direct and inferential mediation model of reading comprehension. *Journal of Educational Psychology*, *99*(2), 311-325.
- Dehaene, S. (2011). The massive impact of literacy on the brain and its consequences for education. *Human Neuroplasticity and Education*, 117, 19–32.
- Dickinson, D. K., Flushman, T. R., & Freiberg, J. B. (2009). Vocabulary, reading and classroom supports for language. In *Vocabulary studies in first and second language acquisition*(pp. 23-38). Palgrave Macmillan, London.
- Dickinson, D. K., & Porche, M. V. (2011). Relation between language experiences in preschool classrooms and children's kindergarten and fourth-grade language and reading abilities. *Child Development*, *82*(3), 870-886.
- Duke, N. K., & Mesmer, H. A. E. (2019). Phonics Faux Pas: Avoiding Instructional Missteps in Teaching Letter-Sound Relationships. *American Educator*, *42*(4), 12-16.
- Ehri, L. C., Nunes, S. R., Stahl, S. A., & Willows, D. M. (2001a). Systematic phonics instruction helps students learn to read: Evidence from the National Reading Panel's meta-analysis. *Review of Educational Research*, 71, 393–447.

- Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001b). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading Research Quarterly*, 36, 250–287.
- Ehri, L. C. (2005). Learning to read words: Theory, findings, and issues. *Scientific Studies of Reading*, 9, 167–188.
- Ehri, L. C., Dreyer, L.G., Flugman, B., & Gross, A. (2007). Reading Rescue: An effective tutoring intervention model for language-minority students who are struggling readers in first grade. *American Educational Research Journal*, *44*(2), 414–448.
- Elbaum, B., Vaughn, S., Hughes, M. T., & Moody, S. W. (1999). Grouping practices and reading outcomes for students with disabilities. *Exceptional Children*, *65*(3), 399–415.
- Elbaum, B., Vaughn, S., Hughes, M. T., & Moody, S. W. (2000). How effective are one-to-one tutoring programs in reading for elementary students at risk for reading failure? A meta-analysis of the intervention research. *Journal of Educational Psychology*, *92*(4), 605–619.
- Ellis, N. C., Natsume, I., Stavropoulou, K., Hoxhallari, L., van Daal, V. H. P., Polyzoe, N., et al. (2004). The effects of the orthographic depth on learning to read alphabetic, syllabic, and logographic scripts. *Reading Research Quarterly*, 39, 438–468.
- Escamilla, K., Hopewell, S., Butvilofsky, S., Sparrow, W., Soltero-González, L., Ruiz-Figueroa, O., & Escamilla, M. (2014). Biliteracy from the start: Literacy Squared in action. Caslon.
- Fien, H., Chard, D. J., & Baker, S. K. (2021b). Can the Evidence Revolution and Multi-Tiered Systems of Support Improve Education Equity and Reading Achievement? *Reading Research Quarterly*, 56, S105-S118.
- Fien, H., Nelson, N. J., Smolkowski, K., Kosty, D., Pilger, M., Baker, S. K., & Smith, J. L. M. (2021a). A conceptual replication study of the Enhanced Core Reading Instruction MTSSreading model. *Exceptional Children*, 87(3), 265-288.
- Fielding-Barnsley, R. (2010). Australian pre-service teachers' knowledge of phonemic awareness and phonics in the process of learning to read. *Australian Journal of Learning Difficulties*, 15, 99–110.
- Figueroa, R. A. (2002). Toward a new model of assessment. *English language learners with special education needs: Identification, assessment, and instruction*, 51-64.
- Fletcher, J. M., Lyon, G. R., Fuchs, L. S., & Barnes, M. A. (2007). Learning disabilities: From identification to intervention. Guilford.
- Florit, E., & Cain, K. (2011). The Simple View of Reading: Is it valid for different types of alphabetic orthographies? *Educational Psychology Review*, 23, 553-576.
- Foorman, B. R., Koon, S., Petscher, Y., Mitchell, A., & Truckenmiller, A. (2015). Examining general and specific factors in the dimensionality of oral language and reading in 4th–10th grades. *Journal of Educational Psychology*, *107*(3), 884.
- Foorman, B., Beyler, N., Borradaile, K., Coyne, M., Denton, C. A., Dimino, J., ... & Wissel, S. (2016). Foundational Skills to Support Reading for Understanding in Kindergarten through 3rd Grade. Educator's Practice Guide. NCEE 2016-4008. What *Works Clearinghouse*.
- Garcia, J. R., & Cain, K. (2014). Decoding and reading comprehension: a meta-analysis to identify which reader and assessment characteristics influence the strength of the relationship in English. *Review of Educational Research*, 84, 74-111.

- García, O., Kleifgen, J. A., & Falchi, L. (2008). From English Language Learners to Emergent Bilinguals. Equity Matters. Research Review No. 1. *Campaign for Educational Equity, Teachers College, Columbia University*.
- García-Mateus, S., & Palmer, D. (2017). Translanguaging pedagogies for positive identities in two-way dual language bilingual education. *Journal of Language, Identity & Education*, *16*(4), 245-255.
- Gersten, R., Baker, S. K., Shanahan, T., Linan-Thompson, S., Collins, P., & Scarcella, R. (2007). Effective Literacy and English Language Instruction for English Learners in the Elementary Grades. IES Practice Guide. NCEE 2007-4011. *What Works Clearinghouse*.
- Gersten, R., Compton, D., Connor, C. M., Dimino, J., Santoro, L., Linan-Thompson, S., and Tilly,
 W. D. (2008). Assisting students struggling with reading: Response to Intervention and multi-tier intervention for reading in the primary grades. IES Practice Guide. NCEE 2009-4045. What Works Clearinghouse.
- Goldenberg, C. (2020). Reading wars, reading science, and English learners. *Reading Research Quarterly*, 55, S131-S144.
- Gonzalez, J. E., Pollard-Durodola, S., Simmons, D. C., Taylor, A. B., Davis, M. J., Kim, M., & Simmons, L. (2011). Developing low-income preschoolers' social studies and science vocabulary knowledge through content-focused shared book reading. *Journal of Research on Educational Effectiveness*, *4*(1), 25–52.
- Good, R. H., Simmons, D. C., & Smith, S. B. (1998). Effective academic interventions in the United States: Evaluating and enhancing the acquisition of early reading skills. *School Psychology Review*, *27*(1),45–56.
- Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial* and Special Education, 7, 7-10.
- Gunn, B., Smolkowski, K., & Vadasy, P. (2010). Evaluating the effectiveness of Read Well Kindergarten. *Journal of Research on Educational Effectiveness*, *4*(1), 53–86.
- Guthrie, J. T., Anderson, E., Alao, S., & Rinehart, J. (1999). Influences of concept-oriented reading instruction on strategy use and conceptual learning from text. *The Elementary School Journal*, *99*(4), 343-366.
- Hernandez, D. J. (2011). Double jeopardy: How third-grade reading skills and poverty influence high school graduation. Annie E. Casey Foundation.
- Hopewell, S., & Escamilla, K. (2014). Struggling reader or emerging biliterate student? Reevaluating the criteria for labeling emerging bilingual students as low achieving. *Journal* of Literacy Research, 46(1), 68-89.
- Hurry, J., Nunes, T., Bryant, P., Pretzlik, U., Parker, M., Curno, T., & Midgley, L. (2005).
 Transforming research on morphology into teacher practice. *Research Papers in Education*, 20, 187–206.
- Hussar, B., Zhang, J., Hein, S., Wang, K., Roberts, A., Cui, J., ... & Dilig, R. (2020). The Condition of Education 2020. NCES 2020-144. National Center for Education Statistics.
- Hwang, H., Cabell, S. Q., White, T. G., & Joiner, R. (2019). A systematic review of the research on the effect of knowledge building in literacy instruction on comprehension and vocabulary in the elementary years. In annual meeting of the Literacy Research Association, Tampa, FL.

International Dyslexia Association. (2019). Structured Literacy™: An introductory guide. Author. FL.

Kamil, M. L., Borman, G. D., Dole, J., Kral, C. C., Salinger, T., & Torgesen, J. (2008). Improving Adolescent Literacy: Effective Classroom and Intervention Practices. IES Practice Guide. NCEE 2008-4027. National Center for Education Evaluation and Regional Assistance.

- Kendeou, P., Savage, R., & van den Broek, P. (2009). Revisiting the simple view of reading. *British Journal of Educational Psychology*, 79, 353-370.
- Kershaw, S. & Schatschneider, C. (2012). A latent variable approach to the simple view of reading. *Reading and Writing*, 25, 433–464.
- Kim, Y. S. G. (2017). Why the Simple View of Reading is not simplistic: Unpacking the Simple View of Reading using a direct and indirect effect model of reading (DIER). *Scientific Studies of Reading*, 21, 310-333.
- Kim, Y. S. G. (2020). Simple but not simplistic: The simple view of reading unpacked and expanded. *The Reading League Journal*, 1(2), 15-34.
- Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist*, 41(2), 75–86.
- Lane, K. L., Fletcher, T., Carter, E. W., Dejud, C., & DeLorenzo, J. (2007). Paraprofessional-led phonological awareness training with youngsters at risk for reading and behavioral concerns. *Remedial and Special Education*, *28*(5), 266–276.
- Language and Reading Research Consortium (LRRC). (2015). Learning to read: should we keep things simple? *Reading Research Quarterly*, 50, 151-169.
- Language and Reading Research Consortium (LRRC) & Chiu, Y. D. (2018). The simple view of reading across development: Prediction of grade 3 reading comprehension from prekindergarten skills. *Remedial and Special Education*, *39*(5), 289–303.
- Li, P., & Clariana, R. B. (2019). Reading comprehension in L1 and L2: An integrative approach. *Journal of Neurolinguistics*, *50*, 94-105.
- Lonigan, C. J., Burgess, S. R., & Schatschneider, C. (2018). Examining the Simple View of Reading with elementaryschool children: Still simple after all these years. *Remedial and Special Education*, 39, 260-273.
- Lonigan, C. J., Anthony, J. L., Phillips, B. M., Purpura, D. J., Wilson, S. B., & McQueen, J. (2009). The nature of preschool phonological processing abilities and their relations to vocabulary, general cognitive abilities, and print knowledge. *Journal of Educational Psychology*, 101, 345–358.
- Lonigan, C. J., Burgess, S. R., Anthony, J. L., & Barker, T. A. (1998). Development of phonological sensitivity in two- to five-year-old children. *Journal of Educational Psychology*, 90, 294–311.
- Lonigan, C. J., Farver, J. M., Phillips, B. M., & Clancy-Menchetti, J. (2011). Promoting the development of preschool children's emergent literacy skills: A randomized evaluation of a literacy-focused curriculum and two professional development models. *Reading and Writing: An Interdisciplinary Journal*, 24, 305–337.
- Mancilla-Martinez, J, & Lesaux, N. (2010). Predictors of reading comprehension for struggling readers: The case of Spanish-speaking language minority children. *Journal of Educational Psychology*, *102*(3), 701–711.

- Moats, L. (2009). Still wanted: Teachers with knowledge of language. *Journal of Learning Disabilities*, 42, 387–391.
- Moats, L. C. (2007). Whole-language high jinks: How to tell when "scientifically-based reading instruction" isn't. Thomas B. Fordham Institute.
- Moats, L. (2019). Structured Literacy: Effective instruction for students with dyslexia and related reading difficulties. *Perspectives on Language and Literacy*, 45(2), 9-11.
- Nations Report Card. (2019). NAEP Data Explore. <u>https://www.nationsreportcard.gov/ndecore/</u> explore/NDE
- National Center for Education Statistics, National Assessment of Educational Progress (NAEP) (2019). 2019 Reading State Snapshot Report, New Mexico Grade 4 Reading. <u>https://nces.ed.gov/nationsreportcard/subject/publications/stt2019/pdf/2020014NM4.pd</u> f
- National Academies of Sciences, Engineering, and Medicine. (2017). Promoting the educational success of children and youth learning English: Promising futures. National Academies Press.
- National Early Literacy Panel (NELP). (2008). Developing early literacy: Report of the National Early Literacy Panel: A scientific synthesis of early literacy development and implications for intervention. National Institute for Literacy.
- National Reading Panel. (2000) Report of the National Reading Panel—Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction. National Institute of Child Health and Human Development.
- New Mexico Public Education Department. (n.d.). *Structured Literacy*. https://webnew.ped.state.nm.us/?s=structured+literacy).
- Noguerón-Liu, S. (2020). Expanding the knowledge base in literacy instruction and assessment: Biliteracy and translanguaging perspectives from families, communities, and classrooms. *Reading Research Quarterly*, *55*, S307-S318.
- Ortiz, A. A., Robertson, P. M., & Wilkinson, C. Y. (2018). Language and literacy assessment record for English Learners in bilingual education: A framework for instructional planning and decision-making. *Preventing School Failure: Alternative Education for Children and Youth*, *62*(4), 250-265.
- Ozuru, Y., Dempsey, K., & McNamara, D. S. (2009). Prior knowledge, reading skill, and text cohesion in the comprehension of science texts. *Learning and Instruction*, 19(3), 228-242.
- Rose, J. (2005). Independent review of the teaching of early reading: Interim report. London: Department for education and skills.
- Rowe, K. (2005). Teaching reading: national inquiry into the teaching of literacy. Department of Education, Science and Training, *Australian Council for Educational Research*.
- Pérez Carreón, G., Drake, C., & Calabrese Barton, A. (2005). The importance of presence: Immigrant parents' school engagement experiences. American Educational Research Journal, 42(3), 465-498.
- Perfetti, C. (2007). Reading ability: Lexical quality to comprehension. *Scientific Studies of Reading*, *11*(4), 357–383.

- Petscher, Y., Cabell, S. Q., Catts, H. W., Compton, D.L., Foorman, B. R., Hart, S. A., ... Wagner, R. K. (2020). How the science of reading informs 21st-century education. *Reading Research Quarterly*, 55(S1), S267–S282.
- Raudszus, H., Segers, E., & Verhoeven, L. (2019). Situation model building ability uniquely predicts first and second language reading comprehension. *Journal of Neurolinguistics*, 50, 106–119.
- Sabatini, J. P., Sawaki, Y., Shore, J. R., & Scarborough, H. S. (2010). Relationships among reading skills of adults with low literacy. *Journal of Learning Disabilities*, *43*(2), 122-138.
- Sánchez, M. T., García, O., & Solorza, C. (2018). Reframing language allocation policy in dual language bilingual education. *Bilingual Research Journal*, *41*(1), 37-51.
- Saunders, W.M., Foorman, B.R., & Carlson, C.D. (2006). Is a separate block of time for oral English language development in programs for English learners needed? *The Elementary School Journal*, *107*(2), 181–198.
- Saunders, W. M., & Marcelletti, D. J. (2013). The gap that can't go away: The catch-22 of reclassification in monitoring the progress of English learners. *Educational Evaluation and Policy Analysis*, *35*(2), 139-156.
- Savage, R. S., Abrami, P., Hipps, G., & Deault, L. (2009). A randomized controlled trial study of the ABRACADABRA reading intervention program in grade 1. *Journal of Educational Psychology*, *101*(3), 590.
- Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In S. Neuman & D. Dickinson (Eds.), *Handbook for Research in Early Literacy* (pp. 97–110). Guilford Press.
- Seidenberg, M. (2017). Language at the speed of sight: How we read, why so many can't, and what can be done about it. Basic Books.
- Shanahan, T. (2020). What constitutes a science of reading instruction?. *Reading Research Quarterly*, *55*, S235-S247.
- Shanahan, T., Callison, K., Carriere, C., Duke, N. K., Pearson, P. D., Schatschneider, C., & Torgesen, J. (2010). Improving Reading Comprehension in Kindergarten through 3rd Grade: IES Practice Guide. NCEE 2010-4038. What Works Clearinghouse.
- Snow, C. E. (2002). Reading for understanding: Toward an R&D program in reading comprehension: Rand Corporation.
- Sparks, R. L., Patton, J., & Murdoch, A. (2014). Early reading success and its relationship to reading achievement and reading volume: Replication of '10 years later.' *Reading and Writing*, *27*(1), 189–211.
- Spear-Swerling, L. (2016). Listening Comprehension, the Cinderella Skill. *Perspectives on Language and Literacy*, 9-15.
- Spear-Swerling, L. (2019). Structured literacy and typical literacy practices: Understanding differences to create instructional opportunities. *Teaching Exceptional Children*, 51(3), 201-211.
- Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, *21*(4), 360–407.
- Stanovich, K. E. (1990). Concepts in developmental theories of reading skill: Cognitive resources, automaticity, and modularity. *Developmental Review*, *10*(1), 72–100.

- Stanovich, K. E. (1991). Word recognition: Changing perspectives. In Barr R, Kamil ML, Mosenthal PB, & Pearson PD (Eds.), *Handbook of Reading Research*, Vol. 2 (p. 418–452). Lawrence Erlbaum Associates, Inc.
- Stanovich, K. E., & Cunningham, A. E. (1993). Where does knowledge come from? Specific associations between print exposure and information acquisition. *Journal of Educational Psychology*, *85*(2), 211.
- Storch, S. A., & Whitehurst, G. J. (2002). Oral language and code-related precursors to reading: Evidence from a longitudinal structural model. *Developmental Psychology*, 38, 934-947.
- Taylor, B. M., Pearson, P. D., Clark, K. F., & Walpole, S. (1999). Beating the Odds in Teaching All Children To Read.
- Therrien, W. J. (2004). Fluency and comprehension gains as a result of repeated reading: A meta-analysis. *Remedial and Special Education*, 25, 253–261.
- Thomas, W. P., & Collier, V. P. (2002). A national study of school effectiveness for language minority students' longterm academic achievement.
- Thurlow, M. L., Ysseldyke, J. E., Wotruba, J. W., & Algozzine, B. (1993). Instruction in special education classrooms under varying student-teacher ratios. *The Elementary School Journal*, *93*(3), 305–320.
- Tong, F., Lara-Alecio, R., Irby, B., Mathes, P., & Kwok, O. (2008). Accelerating early academic oral English development in transitional bilingual and structured English immersion programs. *American Educational Research Journal*, *45*(4), 1011–1044.
- Umansky, I. M., & Reardon, S. F. (2014). Reclassification patterns among Latino English learner students in bilingual, dual immersion, and English immersion classrooms. *American Educational Research Journal*, *51*(5), 879-912.
- Vaughn, S., Linan-Thompson, S., Kouzekanani, K., Pedrotty Bryant, D., Dickson, S. V., & Blozis, S.
 A. (2003). Reading instruction grouping for students with reading difficulties. *Remedial and Special Education*, 24(5), 301–315.
- Vaughn, S., Mathes, P., Linan-Thompson, S., Cirino, P., Carlson, C., Pollard-Durodola, S., ...
 Francis, D. (2006). Effectiveness of an English intervention for first-grade English language learners at risk for reading problems. *The Elementary School Journal*, 107(2), 153–180.
- Vellutino, F. R., Tunmer, W. E., Jaccard, J., & Chen, S. (2007). Components of reading ability: Multivariate evidence for a convergent skills model of reading development. *Scientific Studies of Reading*, 11, 3–32.
- Verhoeven, L, & van Leeuwe, J. (2008). Prediction of the development of reading comprehension: A longitudinal study. *Applied Cognitive Psychology*, 22, 407–423.
- Verhoeven, L., Perfetti, C., & Pugh, K. (2019). Cross-linguistic perspectives on second language reading. *Journal of Neurolinguistics*, 50, 1–6.
- Wagner, R. K., & Torgesen, J. K. (1987). The nature of phonological processing and its causal role in the acquisition of reading skills. *Psychological Bulletin*, 101, 192–212.
- Wagner, R., Torgesen, J., & Rashotte, C. (1994). Development of reading-related phonological processing abilities: New evidence of bidirectional causality from a latent variable longitudinal study. *Developmental Psychology*, 30, 73–87.
- Wanzek, J., Vaughn, S., Scammacca, N., Gatlin, B., Walker, M. A., & Capin, P. (2016). Metaanalyses of the effects of Tier 2 type reading interventions in grades K-3. *Educational Psychology Review*, 28, 551–576.

- Wanzek, J., Vaughn, S., Scammacca, N. K., Metz, K., Murray, C. S., Roberts, G., & Danielson, L. (2013). Extensive reading interventions for students with reading difficulties after Grade 3. *Review of Educational Research*, 83, 163–195.
- Wasik, B. A., & Hindman, A. H. (2020). Increasing preschoolers' vocabulary development through a streamlined teacher professional development intervention. *Early Childhood Research Quarterly*, 50, 101–113.
- Wasik, B. A., & Hindman, A. H. (2018). Why wait? The importance of wait time in developing young students' language and vocabulary skills. The Reading Teacher, 72(3), 369-378.
- Whitehurst, G. J. & Lonigan, C. J. (1998). Child development and emergent literacy. *Child Development*, 69, 848–872.
- Williams, J. P., Pollini, S., Nubla-Kung, A. M., Snyder, A. E., Garcia, A., Ordynans, J. G., & Atkins, J. G. (2014). An intervention to improve comprehension of cause/effect through expository text structure instruction. *Journal of Educational Psychology*, 106, 1–17.
- Ziegler, J., & Goswami, U. (2005). Reading acquisition, developmental dyslexia, and skilled reading across languages: A psycholinguistic grain size theory. *Psychological Bulletin*, 131(1), 3–29.