

The Science of Reading for Emergent Bilinguals in New Mexico

*A Review for the New Mexico
Public Education Department*

Linda Cavazos, PhD

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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 emergent bilinguals (also referred to as English learners or ELs in this document). Less is known about the efficacy of the SOR for native language literacy and biliteracy. Although there is widespread understanding about 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 emergent bilinguals.

Student reading performance data document low reading proficiency for emergent bilinguals 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 emergent bilinguals 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 emergent bilinguals 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 the development of a SOR for emergent bilinguals' framework that incorporates best practices for L1 and L2 literacy and biliteracy instruction for emergent bilinguals across educational settings.

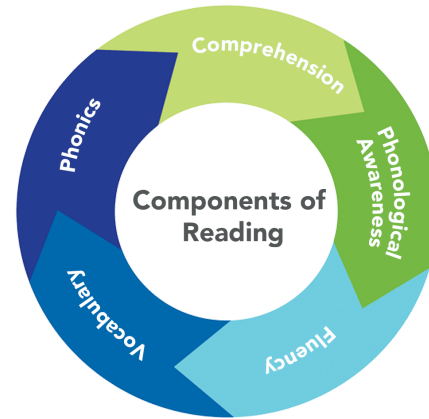
Background

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 that guides how to teach emergent bilinguals how to read in English, in the native language, and that biliteracy. Because New Mexico emergent bilinguals 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 timepoints (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).

Figure 1. Components of Reading



Source: Florida Center for Reading Research

The essential components of reading are applicable to both L1 and L2 literacy, although the instructional practices and time 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 letter-sound combinations have a one-to-one correspondence, but many do not. Students must learn to decode words with a letter-sound correspondence and must be taught how to also decode words with irregular spellings that 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 differences in the languages affect reading accuracy and fluent word-reading skills (Ellis et al., 2004; Ziegler & Goswami, 2005) as well as 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 need to develop automaticity and word recognition to allow cognitive energy for making sense of text and ultimately 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., English learners, 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 that is affecting a third of the nation's students and disproportionately affecting ELs and other subgroups. The NAEP assessment is conducted in English, a language emergent bilinguals 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 emergent bilinguals in English and the native language for a more accurate understanding of their reading achievement (Hopewell & Escamilla, 2014; Ortiz et al., 2018). In addition, emergent bilinguals' oral language proficiency in L1 and L2 should also be assessed regularly and used in conjunction 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 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.

Table 1. New Mexico 2019 Reading Achievement Data

READING ASSESSMENT		% 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

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 for emergent bilinguals.

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 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 the use of 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 emergent bilinguals 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 emergent bilinguals and to identify additions to, or modification of, SOR principles to ensure the SOR addresses the unique language and reading needs of emergent bilinguals in L1 and L2.

“The key is to determine what reading practices work for whom, under what circumstances”

English learners 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, 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 emergent bilinguals.

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.

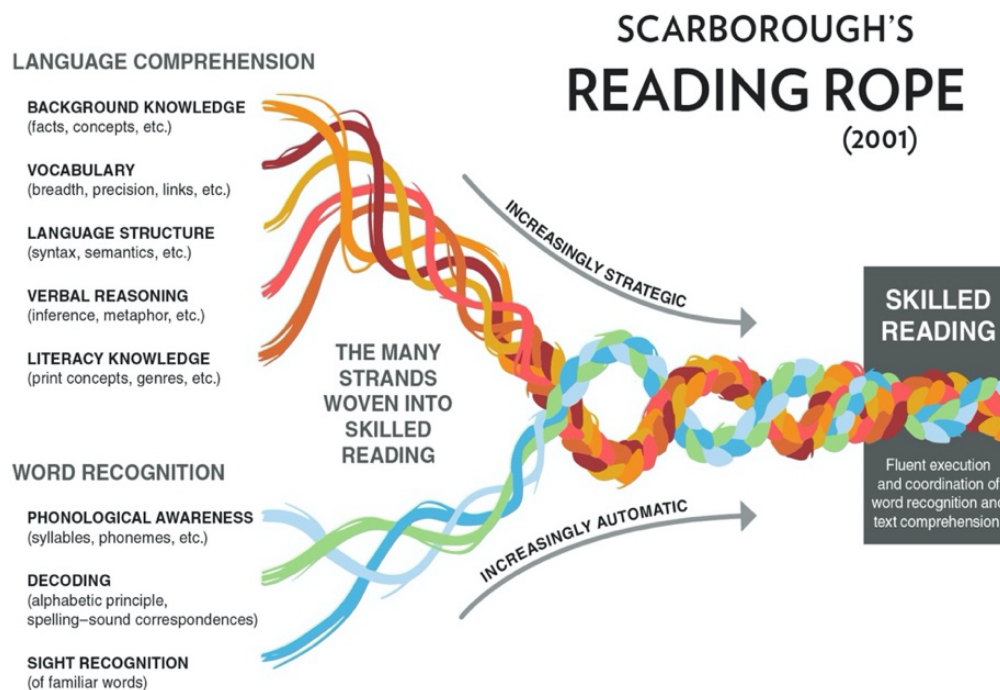
The Science of Teaching Reading Research Base

The SOR is defined as the research and accumulated knowledge that supports best practices for reading development 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 meta-analyses (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 ($R = D \times C$) 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 provides a visual representation of 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) increasingly automatic as reading subskills develop.

Figure 2. Scarborough's Reading Rope



Source: Scarborough, 2001

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 metaanalysis 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 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 al., 2010; Connor et al., 2009; Elbaum et al., 1999, 2000; Gersten et al., 2007, 2008; Gunn et al., 2010; Kirschner et al., 2006; Taylor et al., 1999; Thurlow et al., 1993; Vaughn et al., 2003). Students must be explicitly taught to develop phonological awareness and phonics in English (Foorman et al., 2016; Lane et al., 2007; Savage et al., 2009), decode words, recognize common word parts, encode, and to recognize words automatically (Coyne et al., 2004; Fien et al., 2020b; Foorman et al., 2016; Gunn et al., 2010; Stanovich, 1990; 1991).

“Research supports the importance of explicit instruction in early reading.”

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 much 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 development of fluency, vocabulary, and comprehension.

Language Comprehension

A well-developed language system sets the foundation for early decoding skills and reading comprehension. Emergent bilinguals 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 of the cognitive processes used for reading comprehension are aspects of language comprehension (e.g., word recognition and lexicon, Castles & Nation, 2018).

Language skills are important 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

Emergent bilinguals 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 to which they have not been exposed.

Understanding and tapping into emergent bilinguals' linguistic and cultural assets helps them learn. A student's background knowledge contributes to their text comprehension (Anderson & Pearson, 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 text contributes 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.

“reading informational text contributes to knowledge building and vocabulary”

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 and 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, but they are also essential components of oral language development and instruction. Phonology involves the speech sounds in language and morphology involves the structure of words. Table 2 shows the important components of Structured Literacy oral language comprehension (Spear-Swerling, 2016).

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 builds memory through application and associations (Moats, 2019). Incorporating the four language domains through multi-modal instruction supports language learning (Moats, 2019). The teacher is continuously monitoring, diagnosing, and responding to students' learning and responses and can adjust instruction as needed (Moats, 2019).

A Science of Reading for Emergent Bilinguals Framework

In a review of the SOR for emergent bilinguals, Nogueron (2020) states that the current SOR practices for English literacy are not enough for emergent bilinguals and suggests that the knowledge base about, and best practices for, emergent bilinguals be incorporated into their instructional programming. In particular, emergent bilinguals can use translanguaging, or flexible language use 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 emergent bilinguals deepen language knowledge (Nogueron, 2020).

Drawing attention to language similarities and differences and making cross-linguistic 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 preplanned 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 emergent bilinguals. 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 that incorporates the most effective strategies for emergent bilinguals 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 emergent bilinguals’ framework.

Emergent bilinguals in New Mexico are instructed in various bilingual multicultural education programs (BMEPs).

Determining what components of the SOR work for emergent bilinguals in different BMEPs is critical to effective literacy instruction for emergent bilinguals in New Mexico. The

Structured Literacy New Mexico initiative is the cornerstone of literacy instruction for all students in New Mexico and a good foundation for development of a SOR for emergent bilinguals’ framework. The framework must be augmented with Spanish

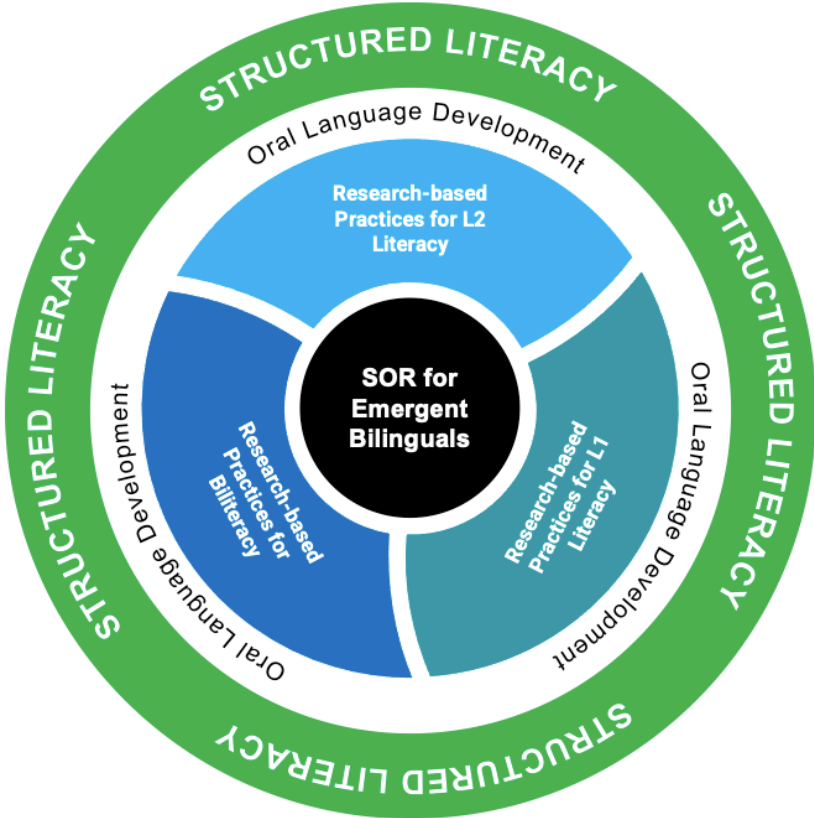
and biliteracy research-based practices that are congruent with Structured Literacy, and should not contradict proven SOR practices that work for ELs. Specific use of Spanish literacy or biliteracy research-based practices will differ across programs. The approach to early reading subskill development (i.e., phonological awareness and phonics) for Spanish literacy is different than English literacy and instructional differences are expected. What should be constant is the use of a Structured Literacy approach to instruct emergent bilinguals in all BMEPs for English literacy and for components of Spanish literacy. For example, in the areas of oral language

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

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 therefore should align English reading instruction to this approach.

SOR foundational skill instruction in English reading is the same for ELs and non-ELs, but more is needed for emergent bilinguals 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 emergent bilinguals’ 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

Figure 3. Science of Reading for Emergent Bilinguals Framework



literacy and for biliteracy will add to the knowledge base for SOR for emergent bilinguals resulting in a dynamic evolving body of research to support improved academic outcomes.

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

- “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 emergent bilinguals
- Ensure that all educators and leaders serving emergent bilinguals are well-versed on 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 that emergent bilinguals can engage and follow instruction while socially integrating (Castro et al, 2014).
- Create language-and literacy-rich classrooms using supportive methods: visual aids, gestures, emphasis, and repetition to ensure learning is comprehensible.
- Adopt a curriculum that provides concrete examples to help emergent bilinguals 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, 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:

1. “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 in addition to 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 needed by emergent bilinguals for school success in English literacy (2020). The best conditions for instructing emergent bilinguals require a language rich context, using a variety of literacy genres, flexible grouping structures, and using a variety of research-based strategies (Figueroa, 2002) to support the individual and group needs of students.

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 important 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 emergent bilinguals and for language minority students who were not classified as emergent bilinguals (Ehri et al., 2007). As emergent bilinguals achieve higher English proficiency levels, they become more skilled readers (Goldenberg, 2020; Li & Clariana, 2019).

Oral language development is important for skilled reading for all students, but for emergent bilinguals 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 emergent bilinguals because many are not developing English language proficiency at expected rates to succeed in school, on average six years (Collier & Thomas, 2017). As many as 25%-40% of emergent bilinguals are considered long-term English learners, 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).

“Oral language development should be an integral part of language and literacy instruction for emergent bilinguals.”

Assessment and Emergent Bilinguals

It is important to consider what makes a valid, reliable assessment. Some considerations include: if emergent bilinguals were represented in the norming samples, if the assessments were validated for emergent bilinguals, if the assessments are available in L1 if the students are taught in L1. Consider whether L1 assessments are routinely available and if they are valid and reliable for ongoing reading assessment and progress monitoring. Assessments administered in

English are largely a measure of language, therefore assessing emergent bilinguals 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 emergent bilinguals' performance (Hopewell & Escamilla, 2014; Torgesen, 1998). Therefore, assessments for emergent bilinguals 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 emergent bilinguals 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 emergent bilinguals in L1 and L2 to determine reading achievement through a paradigm of holistic bilingualism where credit is given for both languages. Regular assessment of oral language proficiency 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).

Emergent bilinguals' 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 emergent bilinguals. Patterns of progress across assessments, formative and summative, are useful for planning instruction. Incorporating oral language assessment into literacy frameworks for emergent bilinguals is a critical component of 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 emergent bilinguals. Adding this rigorous measure to studies on emergent bilinguals will strengthen study findings and will add to the SOR for emergent bilinguals' knowledge base.

Conclusion

Although less is known about the use of the SOR for emergent bilinguals, there are things we do know from both research and practice. It is important to incorporate effective research-based literacy practices for emergent bilinguals in the native language and in English as a second language instruction. For biliteracy contexts, some English SOR practices will be implemented, in concert with best practices for biliteracy development (e.g., translanguaging, metalanguage connections, holistic assessment). Translanguaging allows emergent bilinguals 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 that leads to higher levels of 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 emergent bilinguals' framework to ensure improved instruction across instructional programs.

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

Emergent bilinguals need explicit and systematic instruction in decoding with ample opportunities to read and listen to strong reading models (e.g., read aloud) across a variety of genres. They need to 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 emergent bilinguals develop broad academic, instructional, and social vocabulary, so they become skilled readers and thinkers. Therefore, strategic and purposeful attention must be given to developing emergent bilinguals' 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 emergent bilinguals requires careful attention to metalanguage and crosslinguistic transfer between the native language and English and competent teachers who use culturally and linguistically responsive instruction and who 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 emergent bilinguals, it is imperative to respond to these patterns and learning gaps with evidence-based practices and differentiated instruction to reverse early depressed 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 the necessary approach to impact early learning trajectories and to provide a quality equitable education for emergent bilinguals.

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 relevant 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 emergent bilinguals' research to refine and adjust their instructional practices based on new SOR for emergent bilinguals' evidence.

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

A combined effort from English literacy, native language literacy, and biliteracy educators and researchers is required to improve the reading outcomes of emergent bilinguals. 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 emergent bilinguals. Therefore, we must draw from the evidence base on relevant fields for validated practices supported by rigorous research to add to

the knowledge base for the SOR for emergent bilinguals. 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 emergent bilinguals will result in continued underperformance and disparate and inequitable education that perpetuates the achievement gap between emergent bilinguals and English only students.

Key Takeaways

1

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

2

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

3

The Simple View of Reading has broad application for emergent bilinguals.

4

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

5

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

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