Amplify CKLA

Kindergarten–Grade 5

Research Guide

Executive Summary

Amplify Core Knowledge Language Arts (CKLA) is a comprehensive literacy program developed to translate research findings into high-quality instructional materials that support educators in Kindergarten through Grade 5 in providing evidence-based instruction. CKLA reflects the best we know about how proficient reading and writing develop and is fully aligned with a comprehensive view of the science of reading. According to The Reading League (2022), the science of reading represents a “vast interdisciplinary body of scientifically-based research about reading and issues related to reading and writing” (p. 6). CKLA is a high-quality instructional program that integrates this body of research into its design, offering a systematic, structured, and comprehensive approach to literacy development.

The term "science of reading" has been misunderstood and misused in ways that are neither accurate nor appropriate; however, when applied as intended, the science of reading is important. It matters because it helps educators understand the cognitive processes involved in reading and writing development and provides evidence-based strategies for teaching these skills effectively. Utilizing rigorous, scientifically-based research in program design ensures that instruction is grounded in principles and practices that lead to more effective teaching and improved student outcomes.

This paper outlines the research base that underpins the development of CKLA. Since its inception, CKLA has been carefully designed to incorporate critical research findings, ensuring that educators have the best program materials to help them deliver the most effective instruction. When teachers teach using CKLA, they grow in their understanding of how literacy develops. When students learn in classrooms that use CKLA, they develop as confident and capable readers and writers. The newest version of CKLA builds upon the established research base, integrating updated insights and innovative approaches to further enhance its efficacy in fostering comprehensive literacy skills among all students.

Hallmarks of CKLA:

- A program structure that reflects well-established literacy frameworks
- Systematic, integrated reading and writing instruction to support literacy proficiency
- Explicit and cumulative instruction to support all students

Literacy Frameworks

Research-based literacy frameworks are essential for developing effective curricula because they ensure that the curriculum is grounded in an evidence-based approach that has been shown to promote successful reading and writing development. Amplify Core Knowledge Language Arts (CKLA) was developed to explicitly reflect three well-established literacy frameworks: the Simple View of Reading (Gough & Tunmer, 1986), Strands of Early Literacy Development (Scarborough, 2001), and the Simple View of Writing (Juel et al., 1986; Berninger et al., 2002; Kim, 2020).

Simple View of Reading

The Simple View of Reading (SVR) represents skilled reading as the product of two essential cognitive capacities—language comprehension and word recognition (Gough & Tunmer, 1986). Language comprehension is the ability to understand the meaning of words and sentences, both spoken and written. This involves interpreting the meaning of words and sentences, as well as understanding the nuances of vocabulary, syntax, and the context in which they are used. Language comprehension draws on background knowledge to construct meaningful interpretations of spoken and written language. Word recognition is the ability to accurately and quickly recognize words in print. When word recognition becomes automatic, readers can focus their attention on understanding the text rather than decoding each word. This skill is crucial for reading proficiency, as it enables smooth and efficient reading, freeing up cognitive resources for higher-level comprehension and strategic thinking about text.

The SVR framework has been validated in hundreds of studies across various languages (Catts, 2018). These studies suggest that both language comprehension and word recognition have a significant influence on reading comprehension, although the impact of each factor varies throughout the reading development process. From kindergarten to second grade, word recognition has the strongest influence on reading comprehension. However, as students become more automatic in word recognition, language comprehension becomes increasingly important. According to Catts (2018), this shift “occurs somewhere around third or fourth grade for typically developing readers in English” (p. 317). This does not imply that the primary focus in the early grades should be exclusively on word recognition; rather, it highlights the importance of also supporting students’ language comprehension development to prepare them for understanding increasingly complex texts.

Strands of Early Literacy Development

As outlined by Scarborough (2001), the Strands of Early Literacy Development expand the SVR model by detailing both language comprehension and word recognition, illustrating the multifaceted nature of skilled reading. The model likens proficient reading to a tightly woven rope, where various strands, representing essential elements of literacy, intertwine over time to form skilled reading. The strands related to language comprehension enable readers to become strategic in their approach, while those related to word recognition facilitate automaticity of reading. These domains are interdependent, and effective literacy instruction must address all the strands simultaneously.

Language comprehension strands, initially developed through oral language, encompass background knowledge, vocabulary, language structures, verbal reasoning, and literacy skills. Each component plays a role in a reader's ability to derive meaning from text. As readers become more skilled, these strands work together to deepen understanding of increasingly complex texts. Proficient readers use higher-order cognitive processes to interpret and understand what they read, adapting their strategies to different genres and text challenges, and integrating new information with their existing knowledge. Achieving this strategic reading requires automatic word recognition.

Word recognition strands, also reliant on oral language skills, involve phonological awareness, decoding, and sight recognition. These components help readers automatically identify words in print. Automaticity is based on the recognition that sounds correspond to letters or letter combinations, which are used to form words. Skilled readers generalize sound-spelling patterns to unfamiliar words, and with deliberate practice, they achieve accurate and effortless word recognition. This automaticity is essential so readers can focus on the meaning of the text rather than on decoding individual words.

Simple View of Writing

The Simple View of Writing (SVW) represents skilled writing as comprising two critical skills: composition (ideation) and transcription (Juel et al., 1986; Berninger et al., 2002; Kim, 2020). Composing involves language skills that help writers form a mental model of the ideas they wish to convey. This requires writers to know about the topic for which they are writing,

flexibility with vocabulary for appropriate word choice, the ability to construct sentences that accurately convey ideas, and an understanding of text structure. Transcription skills refer to the mechanical aspects of writing, including handwriting and spelling, that enable writers to convert their thoughts and ideas into a written form. When transcription skills become automatic, writers can focus their attention on the more complex task of constructing texts to effectively communicate their ideas. Similar to automatic word recognition, this skill is crucial for writing proficiency as it enables writers to smoothly and efficiently translate their ideas into print.

Connections to Amplify CKLA

The Amplify CKLA program is designed to support the cognitive processes and literacy skills necessary for students to develop into confident and capable readers and writers. From Kindergarten through Grade 2, Amplify CKLA is divided into two distinct instructional strands: Skills and Knowledge, both of which are taught daily. This dual-strand approach is deliberately crafted to provide early instruction in word recognition, transcription, language comprehension, and composition capabilities as outlined in the Simple View of Reading (Gough & Tunmer, 1986) and the Simple View of Writing (Juel et al., 1986; Berninger et al., 2002; Kim, 2020). The Skills Strand systematically develops crucial word recognition and transcription skills, while the Knowledge Strand emphasizes the systematic development of language comprehension and composition abilities.

In Grades 3–5, Amplify CKLA transitions to a single, integrated strand that reflects the consolidation and interweaving of literacy skills and competencies, as illustrated in the Strands of Early Literacy Development (Scarborough, 2001). This integration enables students to apply their skills and knowledge cohesively, supporting their progression to more advanced stages of reading and writing. Recognizing that some students may require additional support, CKLA offers a dedicated Skills program for Grades 3–5, specifically designed to assist those who need extra time to achieve essential word-level automaticity.

The program is structured to align seamlessly with evidence-based literacy frameworks, ensuring that instruction is both effective and adaptable to individual learner needs. By providing a robust foundation in both the mechanical and cognitive aspects of reading and writing, Amplify CKLA equips educators with the tools to foster literacy skills essential for academic success. Overall, Amplify CKLA's well-rounded approach to literacy education

prepares students for success in their ongoing academic pursuits and communication endeavors.

Use of Texts

Amplify CKLA deliberately exposes students to a variety of text types and genres, as rich text provides breadth and depth of vocabulary exposure, builds academic knowledge, and presents complex language structures. In Grades K–2, instructional texts include Read-Alouds to develop language comprehension and decodables to build word-level automaticity. By Grades 3–5, instructional texts are content-rich and rigorous, building on the foundational skills acquired in earlier grades.

Read-Alouds

Carefully designed, intentional Read-Aloud lessons have significant potential to enhance young students' language abilities and academic knowledge (Cunningham, 2005; Duke & Pearson, 2008; Morrow, 2003; Pinnell & Jagger, 2003; Sénéchal & LeFevre, 2002). Because listening comprehension often exceeds reading comprehension until adolescence, students are capable of understanding much more complex content by listening than they can decode through reading (Stricht & James, 1984). Consequently, students need to be exposed to rich content delivered orally (Catts, Adolf, & Weismer, 2006; Hart & Risley, 1995; Hoover & Gough, 1990; Snow, Burns, & Griffin, 1998). This oral delivery of content is particularly crucial for second language learners and students from high-risk backgrounds (Dickinson & Smith, 1994).

While Read-Alouds have long been a part of instructional practices, the effectiveness of their delivery can vary widely, influencing how well they support students' literacy and language growth (Scarborough & Dobrich, 1994). Research highlights that effective Read-Alouds involve thoughtfully created language-based interactions between teachers and students, both during and outside of the book reading (Hindman, Wasik, and Erhart, 2012; Mosher & Kim, 2024; Teale, 2003; van Kleeck, Vander Woude, & Hammett, 2006; Zucker, Justice, Piasta, & Kaderavek, 2010). These interactions should be cognitively challenging, incorporating questions and reflections about the text and modeling active text analysis that proficient readers engage in independently (e.g., Venegas & Guanzon, 2023). Interactive Read-Alouds should incorporate both literal and inferential questioning before, during, and after the reading process. Subsequent student responses and discussions should remain focused on the text, deepening

and expanding on its concepts (Brabham and Lynch-Brown, 2002; Hindman et al., 2012; Mosher & Kim, 2024; Santoro, Chard, Howard, & Baker, 2008; van Kleeck et al., 2006). Additionally, focusing on vocabulary during and after reading enhances the effectiveness of interactive Read-Alouds (Beck and McKeown, 2001, 2007). By selecting specific words that are critical to understanding the text and important for students' content knowledge, teachers can leverage the shared reading experience to significantly boost students' vocabulary.

Connections to Amplify CKLA

Amplify CKLA Read-Alouds include daily lessons that emphasize oral language development through activities such as vocabulary work, asking and answering questions, engaging in open-ended discussions, and integrating oral and written language. This language-rich approach encourages student interaction before, during, and after the reading. Each lesson begins with "Introducing the Read-Aloud," which previews the text and sets a specific listening purpose. In "Presenting the Read-Aloud," the teacher reads the text, interspersing comments and short questions, supported by visuals to aid understanding and vocabulary acquisition. Following this, the "Comprehension Questions" section features structured literal and inferential questions designed to scaffold students' oral expression and participation by balancing question types and gradually building to more challenging inquiries. The final discussion question often involves peer-sharing routines, such as "Think-Pair-Share." Much of this instructional sequence aligns with the domain-specific structured supplements that have been found to significantly increase students' comprehension in domain-specific Read-Alouds (Mosher & Kim, 2024).

Decodable Texts

Studies have shown that the inclusion of decodable text has a greater impact on the decoding skills of students than using texts with high frequency words; this impact is greatest in Grades K and 1 for students with varying decoding skills and continues for students who struggle to decode in Grade 2 (Cheatham & Allor, 2012; Mesmer, 2001). Decodable texts contain words where the letter-sound correspondences intentionally align with those that have been taught. Materials with decodability also cluster words with simple patterns together within a text. Research shows that decodable text encourages readers to use letter-sounds as they read connected texts (Cheatham & Allor, 2012; Jenkins et al., 2004; Juel & Roper/Schneider, 1985; Mesmer, 2001, 2003; Vadasy, Sanders, & Peyton, 2005). Experts suggest that students likely

benefit most from decodable text when they have learned enough letter sounds to sound out words but do not have strong enough skills to handle the full range of patterns in English that might appear in uncontrolled text (the transition between the partial alphabetic and full alphabetic stages) (Mesmer, 2001).

Connections to Amplify CKLA

Research highlights the significant impact of decodable texts on enhancing decoding skills, especially in early grades (Cheatham & Allor, 2012; Mesmer, 2001). Amplify CKLA's approach to literacy instruction capitalizes on this by offering original, fully decodable student readers for Grades K–2. These chapter books are meticulously aligned with the scope and sequence of each unit, featuring words using the sound-spelling patterns taught to date. Instruction encourages students to focus on letter-sound correspondences to ensure that students engage in meaningful, mastery-oriented practice, crucial for strong decoding skills that lead to automatic word recognition. By providing phonetically controlled decodables, CKLA effectively scaffolds early reading development, offering students the structured practice needed to build automatic word recognition skills.

Content-rich Texts

Content-rich literacy instruction is most effective when knowledge is systematically built over time through reading coherent sets of texts and facilitating related discussions focused on those topics (Hwang, Cabell, & Joyner, 2022). Reading and discussing texts on related topics enables students to revisit semantically related words and ideas (i.e., those with similar meanings) over time. As semantic networks grow in size and density, students can more easily remember new words and build upon the ideas they represent (McCarthy & McNamara, 2021; Mosher & Kim, 2024; Steyvers & Tenenbaum, 2005). Targeting a coherent set of texts to build knowledge over time also promotes a deeper understanding of the selected topics, as well as an increased ability to transfer knowledge to related topics (e.g., Kim et al., 2023; Mosher & Kim, 2024).

Connections to Amplify CKLA

To support the development of deep comprehension skills, Amplify CKLA provides diverse, authentic texts that are organized across years to reflect a coherent, spiraling approach to

knowledge building. The Knowledge scope and sequence intentionally develops content knowledge about a wide range of literary, science, and social studies topics within and across grade levels. It is through this coherent approach that students acquire the depth and breadth of knowledge, vocabulary, language structure, verbal reasoning, and literacy skills, setting them up for success as they can make meaning of the wide variety of text types they encounter. The sequence is designed to build upon earlier content, so that students become generally knowledgeable in the early grades and can rely on a robust web of background knowledge when encountering new, complex texts and materials later in elementary school.

Students explore a variety of disciplinary domains throughout the school year, then have the opportunity to apply and extend that knowledge in subsequent grades and domains. In this way, students are given opportunities to make rich connections across related disciplines and build a more complex understanding of the world around them. Students spend several weeks at a time learning about topics as varied as the five senses, the human body, astronomy, geology, chemistry, early civilizations, medieval empires, early world, American civilizations, and Native Americans. Knowledge about the topic is built up over the weeks, with a diverse range of speaking and listening, writing, and reading activities, which provide repeated exposure to new vocabulary and ideas.

Multi-tiered System of Support

The Multi-Tiered System of Support (MTSS) is an evidence-based framework that ensures all students receive the appropriate level of instruction and intervention based on their specific needs, as identified through data. MTSS approaches emphasize a continuum of high-quality literacy supports starting with universal instruction for all students. Effective universal instruction is crucial because it lays the groundwork for literacy development in all students, thereby minimizing the need for additional intervention. When students require additional support, MTSS operates on the principle of providing increasingly intensive interventions tailored to students' needs, utilizing continuous progress monitoring and evidence-based practices. All instruction in these service delivery models is driven by data on students' reading skills and growth in response to instruction and intervention (Gersten et al., 2009; Fien et al., 2021). While models of MTSS may differ, those that effectively improve students' literacy outcomes share key components. These include the use of a research-based core curriculum, strong connections between core instruction and intervention, explicit and systematic instructional approaches for all students, and the ongoing use of data to determine each student’s level of need and monitor their progress (Fien et al., 2021; Baker et al., 2010; Fuchs & Fuchs, 2006).

A research-based core curriculum is essential for an effective MTSS approach, as it provides a solid foundation that supports academic success for most students. As the first tier of instruction, a high-quality curriculum provides structured strategies that have been proven to yield positive outcomes for all students in the general education setting. Studies, such as those by Batsche et al. (2007), suggest that a strong reading curriculum enables approximately 80% of students to achieve grade-level proficiency without requiring additional intervention, thereby reducing the need for supplemental support. When most students achieve proficiency through universal instruction, teachers and interventionists can focus additional support on the smaller group who need targeted or intensive interventions. This approach optimizes instructional time and staff resources, allowing educators to deliver focused interventions to students who need them most.

A key benefit of MTSS in literacy is its emphasis on data-driven decision-making. Regular assessments provide teachers with valuable insights into each student's progress, enabling them to adjust instruction promptly. This dynamic approach is especially crucial in literacy, where early intervention can significantly shape a student's academic path. Identifying literacy

challenges early enables educators to intervene before difficulties become deeply ingrained, thus promoting long-term academic success. Recognizing differences in learning rates and patterns early on, then tailoring instruction to address specific areas of need, provides a powerful strategy for preventing reading difficulties. High-quality instruction and timely intervention are crucial in supporting students before challenges become more complex and difficult to overcome (Fletcher & Vaughn, 2009; Fuchs & Fuchs, 2006; Vellutino et al., 1996).

For systematic instructional planning to be effective, teachers must consistently monitor students' responses to the core curriculum. Differentiating instruction to meet each student's needs is a cornerstone of a strong general classroom approach. Research on instructional individualization emphasizes the significance of factors such as group size, instructional focus, and activity type—such as independent reading or reading aloud with a teacher—in influencing learning outcomes (Connor et al., 2009; Al Otaiba et al., 2011).

One major challenge in implementing differentiated instruction is the scarcity of activities explicitly designed to align with the skills and goals of the core curriculum. Studies indicate that general training on differentiation or using loosely related activities is less effective than a structured system that integrates assessment, curriculum, and targeted supplementary activities (Al Otaiba et al., 2011). Activities directly connected to the core curriculum, such as guided practice aligned with instructional objectives or small group lessons addressing specific skill gaps, have been shown to enhance learning outcomes. When teachers use structured activities designed to align with both the curriculum and student needs, they can more effectively support progress for all learners. Young students vary significantly in their acquisition of reading skills. Early identification of differences in learning rates and trajectories, along with instructional adjustments to address weaknesses, forms a powerful strategy for preventing reading difficulties. Providing high-quality instruction and intervention at an early stage is essential to prevent challenges from becoming more severe and harder to overcome (e.g., Fletcher & Vaughn, 2009; Fuchs & Fuchs, 2006; Vellutino et al., 1996).

Connections to Amplify CKLA

Amplify Core Knowledge Language Arts (CKLA) is a high-quality core instructional program designed to complement a Multi-Tiered System of Support (MTSS) service delivery model. Amplify CKLA offers research-based, universal instruction for all students, integrating differentiated instruction and student progress monitoring into its core framework, making it

well-suited for MTSS implementation. The program's approach to comprehensive literacy development is based on an integrated system that aligns assessments, curriculum, and supplementary materials to facilitate learning for all students.

At the beginning of each academic year, students undergo assessments to evaluate their code knowledge, which informs initial placements and guides instructional differentiation. These placements determine the use of core materials and identify when supplementary differentiated instruction is necessary. Teachers have access to resources such as the Assessment and Remediation Guide (ARG), the Decoding and Encoding Guide (DERG), and the Intervention Tool Kit, which provide targeted ideas for enhancing or customizing instruction to focus on key skills, with a primary goal of achieving accuracy and automaticity in coding skills and fluent reading.

Additionally, the ARG, DERG, and Intervention Tool Kit equip educators with specific progress-monitoring tools to evaluate students' overall growth and response to the curriculum. These tools guide differentiated instruction tailored to students' needs based on assessment outcomes. Although teachers can use these tools as needed, all students engage in curriculum-based measures embedded within the general instructional materials. These unit-level assessments serve as quick checks to evaluate students' comprehension and mastery of the content in each unit. When students do not meet expected levels, guidance is provided on how to integrate individualized support, ensuring that all learners can advance effectively in their literacy development.

Characteristics of Effective Literacy Instruction

The ultimate goal of literacy instruction is to empower students with the skills to read, write, and communicate meaningfully and independently across various contexts. To achieve this, critical literacy skills must be taught within and across grades using systematic, explicit, cumulative, and data-driven instructional practices (Carnine, Silbert, Kame'enui, Tarver, & Jungjohann, 2006; Schuele & Boudreau, 2008). This involves presenting skills in a purposeful sequence, accompanied by clear models and specific feedback for students' responses. Systematic instruction ensures that skills are introduced progressively—from simple to complex—with each new skill building on previously mastered content. Explicit instruction provides clear, concise demonstrations and explanations, particularly for foundational skills. Cumulative instruction reinforces new skills while integrating prior knowledge, ensuring students have ample opportunities for practice and application in increasingly challenging tasks (Carnine, Silbert, Kame'enui, Tarver, & Jungjohann, 2006; Schuele & Boudreau, 2008). Data-driven instruction uses information on student(s) performance to adapt instruction to meet individual needs and support ongoing growth. By combining systematic, explicit, cumulative, and data-driven methods, literacy instruction becomes both effective and efficient, meeting students where they are and guiding them toward long-term success. These principles, grounded in decades of research, benefit all learners while providing critical support for those who struggle to acquire foundational reading and writing skills (Carnine, Silbert, Kame'enui, Tarver, & Jungjohann, 2006).

Based on these principles, research has also documented specific guidelines for effectively teaching literacy skills, which include (Rosenshine, 2012):

- Start lessons by reviewing prior material to ensure retention and provide a foundation for new content.
- Break down content into manageable parts and introduce it gradually.
- Frequently ask questions to check for understanding and engage students in active learning.
- Demonstrate tasks or skills before students attempt them, offering clear examples.
- Offer support as students practice new skills, providing corrective feedback when necessary.

- Regularly assess whether students are grasping the material, and adjust instruction as needed.
- Ensure students are successful in practicing new skills to build confidence and mastery.
- Offer temporary support for students to help them complete tasks independently as they gain proficiency.
- Gradually reduce guidance and encourage students to practice independently.
- Review material periodically to reinforce learning and strengthen long-term retention.

The essential concept of practice is woven throughout these principles. The critical importance of practice is often overlooked in literacy instruction. For example, automatic word-level reading is a necessary component of reading comprehension (Pikulski & Chard, 2005), and to build such automaticity, practice is a necessary component (Willingham, 2009).

Research on learning and memory points toward three key components of effective practice: 1) motivation and attention, 2) understanding basic skills, and 3) extended practice. The link among these ideas is that they are each seen as strategies that can facilitate memory for information (Baker and Wigfield, 2003; Bandura, 1997; Cepeda et al., 2006; Willingham, 2009). For example, literacy and language learning can be influenced by the actual number of exposures a student is given to specific targets throughout a long instructional period, suggesting that practice, which is focused, rather than ad hoc, may be critical (McGinty et al., 2011; Proctor-Williams, 2009; DeGraaff et al., 2009). Yet, simple drilling is not an effective approach to supporting students' long-term acquisition of information (Cepeda et al., 2006).

Motivation and attention are crucial for effective practice, as research shows that emotionally engaging information is more likely to capture attention and be remembered. However, motivation alone is not enough. Learning theories stress the importance of self-efficacy—a belief in one's ability to succeed—as a key driver of motivation (Bandura, 1997). Mastery achieved through practice boosts self-efficacy, making students more motivated and confident, which encourages them to tackle more challenging tasks or persist with ongoing ones (Usher & Pajares, 2008).

Another critical aspect of practice is developing automaticity with basic skills. Research indicates that skills such as reading require automaticity, not just basic knowledge (Just &

Carpenter, 1996; LaBerge & Samuels, 1974). Cognitive science differentiates between merely knowing something and knowing it so well that it becomes automatic (Willingham, 2009). Initially, learning demands effort to retrieve and apply information, but with practice, this process becomes more efficient. For example, learning to drive is effortful at first, but becomes automatic with practice, facilitating multitasking (Willingham, 2009). In reading, this automaticity is described as the "consolidated alphabetic" phase (Ehri, 2005), where reading becomes seamless. Consistent practice is necessary to achieve this level of expertise, which explains why avid readers often become strong readers (Cunningham & Stanovich, 1991, 1997).

Effective practice also involves extended learning opportunities across different contexts and times, known as distributed practice. This strategy involves spaced repetitions over time, thereby enhancing retention (Carpenter et al., 2012; Cepeda et al., 2006; Gerbier & Toppino, 2015). By varying learning contexts—such as practicing letter-sound relationships in different words or encountering a word in various stories—understanding and memory are strengthened (Toppino & Gerbier, 2014; Willingham, 2009). This varied exposure fosters deeper comprehension by establishing multiple connections to a skill or concept.

Links to Amplify CKLA

Amplify CKLA incorporates the essential elements of literacy instruction by focusing on both language comprehension and word reading fluency. Through systematic, explicit, cumulative, and data-driven practices, CKLA guides instruction across grades to empower students to read, write, and communicate effectively and independently. For example, in Grades K–2, the program introduces students to 150 spellings for the 44 sounds in English, gradually building their phonetic skills by introducing 5–10 letter-sound relationships per unit. This thorough foundation in word reading is solidified through daily practice tasks such as writing, spelling, and reading, ensuring that students develop the necessary skills to understand and engage with texts across various contexts. Additionally, the program systematically introduces students to rich content topics, developing a foundation of knowledge and vocabulary that is built upon within and across Grades K–5.

Motivation and practice are essential in developing these literacy skills, as they drive language comprehension and reading fluency (Bandura, 1997; Just & Carpenter, 1996; Willingham, 2009). CKLA's systematic approach effectively boosts students' self-efficacy, making reading and writing tasks more engaging and attainable (Usher & Pajares, 2008). By featuring rich texts that

enhance vocabulary and promote syntactic growth, and by integrating reading with writing activities, CKLA strengthens comprehension and enables students to apply language concepts actively. Students create sentences, drafts, and responses based on what they read, reinforcing the instructional link between reading and writing.

Further, CKLA emphasizes distributed practice by situating language skills in varied contexts and genres, which fosters robust background knowledge and enhances retention (Carpenter et al., 2012; Toppino & Gerbier, 2014). Through diverse reading and writing activities, students integrate vocabulary, syntax, and phonetic knowledge, effectively bridging the gap between comprehension and word reading. This comprehensive approach ensures that students develop a strong literacy foundation, equipping them with the skills necessary for academic success and lifelong learning.

Foundational Reading and Writing Skills

Phonemic Awareness

To convert written words into speech and spoken words to print, students must master foundational skills in phonological awareness and phonics. These skills are reciprocal; phoneme awareness improves students' decoding, while decoding enhances phonological awareness skills (Clayton et al., 2020; NICHD, 2000; Perfetti, Beck, Bell, & Hughes, 1987; Torgesen, Wagner, & Rashotte, 1994). Phonological awareness involves understanding that words are composed of sounds and being able to manipulate those sounds, from syllables to individual phonemes and for example, identifying the phonemes in "cat" (/c/ /a/ /t/) or recognizing the word "cat" without the initial /c/ sound. These skills are crucial because students need to know that sounds are represented by graphemes, or letters, on the page. Phonological awareness instruction, particularly when combined with letter-sound knowledge and decoding, is essential for improving reading outcomes, highlighting the importance of establishing automaticity in encoding sounds into print (Hulme et al., 2012; Torgesen, Wagner, & Rashotte, 1999; Troia, 1999).

There is a continuum of phonological awareness that students must traverse to become effective decoders, which includes translating sounds into printed forms. Phonological awareness develops from larger units, such as rimes ('at' in bat, cat, and hat), to smaller ones, like phonemes. Students need to learn to blend and segment words at these levels, starting with rhyming (Smith, Simmons, & Kame'enui, 1998; Torgesen, Wagner, & Rashotte, 1994). Emphasizing phoneme-level skills is crucial, as these are the most predictive of successful word reading and spelling (Blachman, Tangel, Ball, Black, & McGraw, 1999). Automaticity in encoding sounds into graphemes is crucial because it enables students to efficiently convert spoken language into written form, a vital component of early literacy development. Simultaneous instruction in phonological awareness and phonics accelerates literacy skills in struggling students more effectively than focusing on one domain alone, ensuring they can connect the sounds they hear to the letters they see and write on the page (Haskell, Foorman, & Swank, 1992; Torgesen, Wagner, & Rashotte, 1994).

Links to Amplify CKLA

In CKLA, phonological awareness instruction begins with providing students with prerequisite skills in identifying sounds and sequences of sounds using environmental sounds. Students count the number of environmental sounds they hear, requiring them to distinguish between discrete sounds, much like distinguishing between discrete sounds in spoken words. Next, students identify whether environmental sounds are the same or different, and then proceed to name initial, medial, and final sounds. As part of this instruction, students are also learning the meaning of position words as preparation for phonemic awareness and phonics instruction.

Instruction quickly builds on this foundation to develop students' oral blending skills and introduces them to blending at the phoneme level. Students blend two syllables to form two-syllable words. This is analogous to blending sounds to form words, which will be the next step. Blending syllables, however, is much easier because syllables can be meaningful units (e.g., ant·hill) as opposed to sounds, which are abstract and have no meaning in isolation (e.g., /a/ . . . /n/ . . . /t/). Instruction progresses from blending two syllables to blending two sounds, and then to blending three sounds. Instruction in the alphabetic code begins in the third unit of Kindergarten, after these foundational lessons. Instruction in phonological and phonemic awareness includes word play, rhyming, and explicit instruction in directionality—all intended to develop students' listening sensitivity. Phonemic awareness and sound-symbol correspondences are taught in conjunction with each other. Chaining activities are a main component of foundational skills throughout Grades K–2. In these activities, students must form a set of words that differ by a single letter transformation. For example, students start with the word "sat" and are prompted to change it to "sap," then "sap" to "tap," and so on. This activity has been found to improve students' general decoding, phonological awareness, and comprehension skills, as it requires students to attend to and manipulate individual phonemes in words and to recognize each grapheme position within the word as they decode (McCandliss, Beck, Sandak, & Perfetti, 2003). In Grades K–2, phonological and phonemic awareness elements are included throughout lessons to review, extend, and support the acquisition of code knowledge.

Phonics / Decoding

Decoding skills are essential for reading new words and developing reading fluency; however, the opacity of English makes it one of the most challenging orthographies to learn (Ellis et al., 2004; Aro & Wimmer, 2003; Wimmer & Goswami, 1994).

To successfully read words as whole words, students must first learn the sounds that letters make and be able to blend those sounds into words (e.g., NICHD, 2000). Ehri's four-stage theory of how students learn to read words explains that students first progress through a pre-alphabetic phase where they memorize visual representations of words and guess words in context to a partial alphabetic phase where they have partial connections between letters and sounds in their memory and use those connections to begin to decode some words. During this phase, students may apply their letter-sound knowledge to the first letter in words but may not extend it to letters in subsequent positions (e.g., they may read "tap" as "tie" and "pat" as "pod"). As they continue to learn, students progress to the full alphabetic phase, where they apply letter-sound knowledge to decode words, and then to the consolidated alphabetic phase, where they store word parts in larger units and read words more automatically (Ehri, 2005).

There is a continuum of phonics skills that students must learn and be explicitly taught to become successful decoders. Skills in the phonics domain include the sounds that individual letters and letter combinations make (e.g., b says /b/, oo says /oo/), blending those sounds into words, reading words with various syllable types, and the use of strategies for breaking words into parts (roots, prefixes, suffixes, syllables) to read them (e.g., look for the root and ending in jumped to read the word). Handwriting should be incorporated into early phonics instruction, as it facilitates reading acquisition in young students, helping students activate specific areas of the brain for letter processing more effectively than typing or tracing (James & Engelhardt, 2012). It is beneficial to teach more complex grapheme-phoneme correspondences than just individual letters and their sounds (e.g., Savage, Georgiou, Parrila, Maiorino, Dunn, & Burgos, 2020) and to teach students to decode and recognize word parts, especially morphemes (Manyak, Baumann, & Manyak, 2018; White, Power, & White, 1989; White, Sowell, & Yanagihara, 1989). Some research has started to investigate the pacing of phonics instruction, specifically letter-sound instruction. This research suggests that teaching new letter-sound combinations at a pace faster than the typical one sound per week is beneficial for all students, with students having lower starting skills benefiting even more (Sunde, Furnes, & Lundetræ, 2020). Further, it isn't enough for students to demonstrate accuracy with these skills; they must also be able to

engage in phonics and decoding skills with a level of fluency or automaticity to facilitate fluent reading for meaning (Ritchey & Speece, 2006; Hudson, Pullen, Lane, & Torgesen, 2009).

Phonics instructional approaches help students crack the code by highlighting spelling regularities and providing rules for letter-sound correspondences, enabling them to decode new words and build toward automatic word recognition. Much research has documented the benefits of instruction in the code in kindergarten and first grade and beyond (e.g., Connor et al., 2007). Many studies document that phonics instruction is most effective when teaching specific phoneme-grapheme correspondences (Christiansen & Bowey, 2005; de Graff et al., 2009; Johnston & Watson, 2004).

Links to Amplify CKLA

CKLA's Skills Strand is designed to maximize practice in newly taught sound spellings through organized instruction, systematic coverage, and practical application in reading and writing. The program builds from fundamental skills, focusing on both environmental sounds and early writing techniques. It was developed with cognitive science principles in mind, emphasizing learning, application, and repeated practice to achieve automaticity and extend skills across contexts. In K–2, CKLA introduces 150 spellings for the 44 English sounds, offering daily lessons on 5–10 letter-sound relationships per unit over 2–3 weeks. This structure supports intensive practice and extended activities, such as independent reading and writing, that also nurture grammatical skills, genre writing, and comprehension.

Amplify CKLA employs a comprehensive instructional approach to teach phoneme-letter patterns and word structures for reading and spelling, utilizing a blended method aligned with current research on effective word-level instruction. In Kindergarten, the CKLA program focuses on building a strong literacy foundation by teaching the most common and least ambiguous spellings for each of the 44 sounds in English, such as using "a_e" for the long “a” sound. This approach includes explicit instruction on each sound-spelling pattern, emphasizing the recognition, writing, and practice of sound-letter connections within connected text. Such clear and consistent instruction minimizes confusion and helps students master frequent spellings and sound-letter patterns. Additionally, the program emphasizes phonemic awareness skills, such as blending and segmenting, which are vital for the development of young readers (Torgesen et al., 2001; Blachman, 1997). Research indicates that this strategy provides an early advantage in reading development for Kindergarten students (Foorman et al., 1997).

Encoding

Experienced readers have three representations of a word: its sound, spelling, and meaning. Strong readers can access word meanings by using both the sound of the word and its spelling or orthography, and this ability allows students to decode more efficiently and focus on comprehension. Thus, reading and spelling (or encoding) are strongly related processes. A student's spelling skills provide information about their decoding skills (e.g., what letter-sound correspondences a student knows), and the process of spelling a word contributes to the development of a student's decoding skills (Ouellette, 2010).

The ability to utilize both the sound and spelling pathways develops over time; readers must build their mental representations of word spellings through experience and practice reading words (Willingham, 2017), as well as through effective spelling instruction. Spelling instruction transfers to reading skills, helping students build awareness of the sounds in words and the letters and patterns that represent those sounds (Joshi, Treiman, Carreker, & Moats, 2008). Repeated practice spelling words with shared patterns has been shown to improve students' skills in both reading and spelling words with those patterns (Conrad, 2008; Ouellette, 2010). Further, providing context for word meanings during a spelling task boosts students' orthographic knowledge of words (Ouellette, 2010).

Links to Amplify CKLA

The Amplify CKLA program takes a comprehensive approach to teaching the code of the English language in the Skills Strand. While the English language has only 26 letters, these letters combine to create over 150 spelling patterns that represent 44 distinct sounds of the language. In most reading programs, students are explicitly taught only a fraction of this information and must glean the rest from incidental exposure to these spelling patterns through text. CKLA focuses on explicitly teaching each of the distinct sounds and the many ways that these sounds are represented (via letters and letter combinations). This comprehensive approach ensures that educators have the knowledge they need to address any text and any word.

In Amplify CKLA, the Skills Strand focuses on decoding and encoding (spelling) skills taught in tandem, since these processes both draw upon the same linguistic knowledge. Letter-sound correspondences are explicitly taught, with sounds as the primary organizing principle of the program.

Automaticity and Fluency

While we know that reading is not a simple process, the Simple View of Reading (Gough & Tunmer, 1986) highlights that reading requires skills in two major areas: readers must convert written words into speech (they must decode), and they must understand the meaning of that speech (they must comprehend). Mastery of the written code or the ability to read words with automaticity is necessary but not sufficient for reading success (LaBerge & Samuels, 1974; Pikulski & Chard, 2005). Students' mastery of the code is causally related to comprehension (e.g., Garcia & Cain, 2014; McCandliss, Beck, Sandak, & Perfetti, 2003). Research has shown that fluency mediates the role of decoding in comprehension; in other words, it "acts as a conduit to reading comprehension" (Silverman, Speece, Harring, & Ritchey, 2013). Lack of fluency prevents readers from adequately comprehending the texts they read, as they must devote considerable cognitive effort to decoding. When readers automatically recognize words, cognition can be allocated to higher-level processes, such as reading comprehension (Share, 1995; Cummings, Dewey, Latimer, & Good, 2011; Willingham, 2017).

Though it is often misunderstood as being speed reading, fluency actually encompasses reading with accuracy, automaticity, and expression (Rasinski, Homan, & Biggs, 2009). Reading fluently requires readers to complete multiple tasks simultaneously: they must identify words, process the meanings of words, draw connections within and across sentences, make inferences, and relate text to prior information (Fuchs, Fuchs, Hosp, & Jenkins, 2001). Thus, to be fluent and automatic, readers must first learn phonemes, then progress to reading morphemes, then to whole words. Level and growth in fluency with individual letter sounds and decoding individual words relate to later oral reading fluency in both kindergarten and first grade (Cummings, Dewey, Latimer, & Good, 2011). Reading whole words enables readers to bypass the process of translating letters, which requires considerable effort and diverts resources away from comprehending the text (Cummings, Dewey, Latimer, & Good, 2011; Willingham, 2017).

To read words automatically—the ultimate goal of fluent reading—students must receive systematic instruction and practice in phonics and fluency with phonics skills (Carnine et al., 2016). Students must have multiple opportunities—spaced over time and across various contexts—to practice, generalize, and review these phonics skills, which range from basic letter-sound recognition to breaking down larger words into their component parts (Carnine et al., 2016; Toppino & Gerbier, 2014). At the level of text fluency, students should hear models of

fluent reading and engage in repeated readings to improve their text reading fluency (NICHD, 2000; Hasbrouck, 2020; Samuels, 1979; Stevens, Walker, & Vaughn, 2017; Therrien, 2004).

Links to Amplify CKLA

The Skills Strand focuses instruction on developing fluency with the English code through explicit instruction and ongoing practice. Students are taught critical skills to mastery and are then given opportunities to review and practice these skills over time. Instruction also prioritizes the most common or least ambiguous spelling for a sound (the basic code spelling), later teaching alternatives for sounds that can be spelled several different ways. The deliberate, strategic approach allows students to experience success and mastery, then gradually adds complexity as students gain confidence and automate their reading skills.

Amplify CKLA is intentionally organized into two strands in Grades K–2 to reflect what the Simple View of Reading demonstrates that young learners need to become proficient readers. The program is carefully organized to ensure students receive the necessary instruction and support to develop automaticity with the code and become fluent readers and writers. The Knowledge Strand focuses instruction on developing language comprehension by building background knowledge and growing vocabulary. During this strand's daily Read-Alouds, students also encounter examples of fluent reading.

The approach to fluency within Amplify CKLA reflects the goal of fluency work as being an integrated task (one that supports decoding and comprehension). Fluency work is an integrated aspect of the program's systematic approach to instruction and practice. The program's fluency instruction includes modeled reading, assisted reading (such as choral or paired reading), and independent reading, along with a breadth of text encounters and extended, in-depth reading of selected texts. This multifaceted approach ensures that students receive low-stakes practice along with engaging, authentic fluency tasks, such as performances.

Language Comprehension

Language comprehension is a fundamental aspect of reading comprehension and writing composition, as it enables readers and writers to interpret text, construct and communicate meaning, gather information, and apply it across contexts. Without strong language comprehension and composition skills, individuals may struggle to engage effectively with and create written material. Extensive research has identified critical components of language comprehension, including background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge, which are essential for building and updating the mental model needed to comprehend text and for writers to convey thoughts and ideas clearly (Kim, 2020; Oakhill, Cain, & Elbro, 2015; Rapp et al., 2007; Scarborough, 2001; Fitzgerald & Shanahan, 2000; Graesser, Singer, & Trabasso, 1994). Students who face challenges in reading comprehension and writing composition often require additional support to develop these skills and communicate a cohesive understanding of texts (Cain, 2022; Cartwright, 2010). To address these challenges, researchers focus on identifying the most important language skills for comprehension and composition, examining why some students struggle, and determining effective teaching strategies to strengthen these skills.

Background Knowledge

Cognitive models suggest that strong reading comprehension is grounded in the ability to connect information and form a coherent mental model of the text (Graesser, Millis, & Graesser, 2011; Kintsch, 1998). To achieve this, students rely on their background knowledge to fill in gaps and make implicit connections. For instance, knowledge enables readers to infer context-related details, such as understanding that forgetting a coat in winter suggests a feeling of cold discomfort. It also helps disambiguate meanings, such as distinguishing between "running" as participating in an election and a physical activity. Furthermore, integrating information across sentences, such as realizing a character without a coat in snow might cry from being cold, highlights the importance of prior knowledge in making predictions and drawing inferences. A strong background knowledge in domains such as science or social studies plays a pivotal role in recalling ideas from content-area texts and generating the necessary inferences for comprehension (Mosher & Kim, 2024; McCarthy et al., 2018).

Additionally, well-developed background knowledge, both in quantity and coherence, enables readers to flexibly connect their knowledge to new information in a given text (Kendeou &

O'Brien, 2016; McCarthy & McNamara, 2021). This is particularly effective when readers possess strong knowledge about the text's topic, but even unrelated, well-structured knowledge can support comprehension by providing adaptable schemas (Hwang, McMaster, & Kendeou, 2022). Hwang, McMaster, and Kendeou (2022) found that science domain knowledge has a positive influence on reading comprehension, a relationship that is mutually reinforcing throughout elementary education. This relationship is especially strong for multilingual learners, potentially compensating for gaps in English proficiency (Hwang & Duke, 2020).

Therefore, it is crucial to systematically build domain knowledge within and across topics to foster interconnected knowledge schemas. Teachers should integrate content knowledge development into literacy instruction rather than merely activating existing knowledge before reading. A meta-analysis by Hwang, Cabell, and Joyner (2022) demonstrated that integrated literacy instruction significantly enhances student vocabulary and comprehension, reinforcing the importance of simultaneous knowledge and literacy skill development. Moreover, increased background knowledge facilitates the selection of effective comprehension strategies and can compensate for weaker reading skills. Research indicates that students with strong topic knowledge outperform readers lacking the same background, underscoring that simply teaching reading strategies is insufficient without building knowledge (Willingham, 2006).

Knowledge is equally vital in writing, as a deep understanding of a topic enhances a writer's ability to convey ideas clearly and effectively (Fitzgerald & Shanahan, 2000; Kim, 2020). Writers with extensive knowledge can draw from a wealth of information to craft detailed and nuanced arguments or narratives. This familiarity allows them to incorporate relevant facts and insights, making their texts more engaging and authoritative. Additionally, knowledge broadens vocabulary and syntax choices, enabling writers to use precise language that accurately reflects their intent, ultimately improving the text's resonance and informativeness for readers.

Links to Amplify CKLA

The Amplify CKLA program is designed to systematically build students' background knowledge in key content areas, which is crucial for reading comprehension and writing composition. Through well-organized Read-Aloud texts in Grades K–2 and student readers in Grades 3–5, students efficiently acquire knowledge and vocabulary. The program's framework integrates knowledge development with comprehension and composition skills, fostering a learning environment that supports comprehensive literacy development. Texts are organized around

specific domains or topics, such as literature, science, and history, providing a broad exposure to various subjects.

These domains are not only ordered systematically throughout the academic year to reinforce previously introduced ideas—such as linking nursery rhymes and early concepts to later discussions of colonial towns and trades—but are also structured across years to create a coherent, spiraling approach to knowledge building. Content is expanded, refined, and becomes more complex over time, ensuring that all students develop a shared knowledge base to support the comprehension of increasingly complex texts and composition of a range of text types. This domain-focused strategy aligns with cognitive research, as it emphasizes the use of comprehension and composition skills in meaningful contexts.

Successful text comprehension requires readers to employ strategies that enable them to form inferences and connect text elements, and background knowledge is essential for this process. Amplify CKLA incorporates comprehension strategies into lessons as tools for knowledge-building, rather than as objectives in themselves. Students use their growing knowledge to analytically engage with texts, with teacher support scaffolding their use of comprehension strategies. For example, during a domain's two- to three-week focus, students listen to Read-Alouds on a single topic, building the vocabulary and knowledge they need to predict, analyze, and evaluate information. Teachers guide this process through pre-reading introductions, guided listening supports, and post-reading discussions, ensuring comprehension skills are taught in a knowledge-centered context, consistent with cognitive insights.

Successful text composition requires writers to draw on their background knowledge to coherently organize and express their ideas. Amplify CKLA incorporates writing composition instruction within the context of unit-level content. Students use their developing content knowledge to integrate facts and insights that enhance the depth and clarity of their writing. In each K–2 domain and 3–5 unit, students compose a range of text types, including narrative, informational, opinion, research, and poetry. Teachers support this process by encouraging students to use their accumulated knowledge as a framework for new compositions, guiding them through sentence-level composition, as well as organizing, drafting, and revising stages with feedback that highlights the interplay between their understanding of a topic and their expression of it. By situating writing tasks within a rich knowledge base, Amplify CKLA enables

students to develop the skills necessary for composing texts that are both insightful and well-structured, reflecting a comprehensive understanding of the content and its implications.

Vocabulary

Extensive research has highlighted a strong connection between vocabulary knowledge and academic success, particularly in reading (Beck, McKeown, & Kucan, 2013; Nation & Snowling, 2004; NICHD, 2005). Vocabulary impacts a wide range of language outcomes, including word reading (Ricketts, Nation, & Bishop, 2007), reading comprehension (Cain & Oakhill, 2014), understanding content area texts (Anderson & Freebody, 1981; Nagy, 1988), and writing composition (Fitzgerald & Shanahan, 2000; Kim, 2020). Explicit vocabulary instruction is especially crucial for students with reading difficulties and multilingual learners (ML/ELs), as it effectively enhances their vocabulary skills (Elleman et al., 2009; August et al., 2005). Since teaching vocabulary in depth is essential but time-consuming, instruction should focus on high-utility academic vocabulary (Tier 2 words) necessary for accessing the curriculum across disciplines (McKeown et al., 2012). Additionally, content-specific vocabulary (Tier 3 words) should be explicitly taught, as these words often label essential concepts that build on each other, requiring a robust understanding to grasp more complex ideas (Bravo & Cervetti, 2008).

Effective vocabulary instruction fosters in-depth knowledge by constructing semantic networks and examining word relationships across various contexts (Beck, Perfetti, & McKeown, 1982; Coyne, McCoach, & Kapp, 2007). Vocabulary is learned incrementally, so depth of knowledge is more important than breadth when it comes to reading comprehension (Oakhill, Cain, & Elbro, 2015). Extended vocabulary instruction has been shown to significantly improve vocabulary skills, reading comprehension, and writing composition, with students benefiting most from in-depth learning approaches compared to shallow instruction (Coyne et al., 2007).

Content-area vocabulary (Tier 3 words) is also important to teach explicitly because these words often serve as labels for key concepts in the content area (Cervetti, Pearson, Bravo, & Barber, 2006). Additionally, concepts build on each other, so a poor and/or shallow understanding of a word will have a negative impact on related vocabulary for more advanced concepts (Bravo & Cervetti, 2008). These words are often difficult to learn incidentally because they tend to be abstract (Nagy, Anderson, & Herman, 1987), they frequently carry multiple meanings that differ across content areas (Johnson, Moe, & Bauman, 1983), and they are likely to be new labels for unknown ideas and concepts (Armbruster, 1992; Graves & Prenn, 1986).

This explicit vocabulary instruction should instill a deep knowledge of vocabulary by having students explore relationships among words to build semantic networks with extended examples across multiple, varying contexts (Beck, Perfetti, & McKeown, 1982; Coyne, McCoach, & Kapp, 2007; McKeown et al., 2012). This is due to the nature of vocabulary learning: words are learned incrementally, with knowledge becoming more refined with repeated exposures across varying contexts (Ouellette, 2006). Each word is part of a network of other words (i.e., the semantic network); therefore, as students connect more words and concepts to a given word, they will understand that word with more precision and depth (Stahl & Nagy, 2006). In fact, it is students' depth of knowledge, rather than breadth, that is most important for reading comprehension (Oakhill, Cain, & Elbro, 2015). For content-area reading comprehension in particular, it is critical to teach words incrementally over time, including definitional, contextual, and relational information to build depth of knowledge, as content-area reading often demands a higher and more specialized understanding of word knowledge (Bravo & Cervetti, 2008).

Extended vocabulary instruction that targets depth of knowledge effectively increases elementary students' vocabulary skills (Coyne, McCoach, & Kapp, 2007), their reading comprehension (Beck et al., 1982), and their writing composition (Fitzgerald & Shanahan, 2000). At-risk students with lower vocabulary skills have experienced substantial vocabulary growth when deep knowledge is targeted, as compared to students who received more shallow vocabulary instruction, such as providing definitions within only one context (Coyne et al., 2007).

Explicit vocabulary instruction should also specifically target words with multiple meanings and idioms. As mentioned previously, many domain-specific academic words have multiple meanings, and students must learn to distinguish among these across various contexts (Bravo & Cervetti, 2008). Additionally, understanding that some words and phrases are meant to be interpreted figuratively, not literally, is important for overall text comprehension, as up to 10% of sentences in students' literature contain idiomatic expressions (Nippold, 1991). Students, especially struggling readers and ML/EL students, may find it especially difficult to understand these phrases, as their meanings are not transparent (Cain et al., 2005; McPherson & Randolph, 2014), and thus benefit from direct teaching of these expressions (Cain et al., 2005). Furthermore, understanding that words and sentences can have multiple meanings is a crucial skill for effective reading comprehension and writing composition. Students who are good at this are demonstrating a type of metalinguistic awareness (i.e., they are able to explicitly think

about and manipulate language). Readers who can think flexibly about word and sentence meanings are better able to use context to monitor their comprehension for meaning (Zipke, 2008; Zipke, Ehri, & Smith Cairns, 2009) and have better overall reading comprehension (Yuill, 2009).

Importantly, it is critical to support this extended, explicit instruction of vocabulary with intentional opportunities for students' implicit vocabulary learning (NICHD, 2000). This is most effectively achieved by providing opportunities for both independent reading and listening to texts being read aloud, exposing students to vocabulary organized around topics of study (Rehder & Hastie, 2004), having them write about these topics, and fostering their curiosity about words.

Students also require practice using strategies, such as morphological analysis, to help them learn new words independently during reading (Bowers, Kirby, & Deacon, 2010; Goodwin & Ahn, 2010). Teachers should thus provide intentional opportunities for word work that are embedded in reading instruction to increase students' bank of knowledge of high-utility morphemes that they can utilize to help understand the meanings of unknown, multimorphemic words in texts.

Links to Amplify CKLA

A key objective of the Amplify CKLA program is to systematically build students' knowledge while providing exposure to and instruction in both academic and domain-specific vocabulary. This structured approach to knowledge and vocabulary development enables students to grow as confident readers and writers across grade levels. Unlike theme-based units that loosely connect topics, Amplify CKLA organizes content into domains, focusing on coherent topics with shared vocabulary. This structure supports vocabulary acquisition by introducing students to networks of related words, facilitating connections and inferences that enhance learning (Neuman, 2009; Wright et al., 2022).

Domains in Amplify CKLA revolve around focused topics, allowing vocabulary to be refined and expanded across grades. This method provides students with exposure to semantic networks where words share properties and build upon one another hierarchically. By repeatedly encountering core vocabulary and concepts within these domains, students deepen their understanding of subject matter. Over time, the sequential organization of domains fosters vocabulary development, as students revisit and expand on shared vocabulary and ideas, such

as the five senses or the human body, enhancing both breadth and depth of their word knowledge (Beck et al., 2013). Within units, CKLA also regularly instructs students on multiple-meaning words and complex texts that feature figurative language and idioms. Such activities help students grasp the flexibility and nuance of language, preparing them to understand and produce a wide range of communication.

Instruction within Amplify CKLA emphasizes explicit high-utility Tier 2 vocabulary instruction in each lesson, equipping students with words relevant across various contexts. Word Work activities, based on the work of Beck, McKeown, and Kucan (2002), focus on deepening word knowledge by exploring word relationships, contexts, and morphemes. The CKLA Vocab App reinforces Tier 2 vocabulary practice, helping students master these academic words across various settings. Throughout the program, students engage in writing and discussions that incorporate both Tier 2 and Tier 3 vocabulary, enhancing their capacity for effective communication.

Morphology

As discussed, students require practice using strategies, such as analyzing the morphological structure of a word, to help them learn new words independently during reading. Research has highlighted the role of morphological awareness (MA) in students' ability to read, spell, and comprehend complex words (Bowers et al., 2010). Specifically, MA is an independent form of linguistic awareness that contributes to reading skills above and beyond other known predictors, such as vocabulary, nonverbal reasoning, phonological awareness (PA), and orthographic knowledge (Bryant, Nunes, & Bindman, 2000; James, Currie, Tong, & Cain, 2020; Roman, Kirby, Parrila, Wade-Wooley, & Deacon, 2009).

It is well established that MA is related to reading in the upper elementary and middle grades, as students are exposed to many morphologically complex words in academic texts (e.g., Bowers et al., 2010). A growing body of research has also highlighted the importance of MA in reading acquisition, in conjunction with other key early reading skills, such as PA and orthographic knowledge (Apel, Wilson-Fowler, Brimo, & Perrin, 2012; Carlisle, 1995; Carlisle & Nomanbhoy, 1993; Deacon, Campbell, Tamminga, & Kirby, 2010; Deacon & Kirby, 2004; Nunes, Bryant, & Bindman, 2006; Wolter, Wood, & D'zatko, 2009). The results of these studies suggest a predictive relationship between MA and various reading outcomes for kindergarten through third-grade students.

Focusing morphological instruction on frequently occurring, consistently spelled morphemes gives students a powerful strategy for tackling unknown multimorphemic words during reading, and is therefore an efficient way to improve students' vocabulary and reading comprehension skills (e.g., Bowers et al., 2010; Gellert, Arnbak, Wischmann, & Elbro, 2021; Goodwin & Ahn, 2010). Morphological analysis is a word learning approach that can be tailored to any content area (Bowers et al., 2010; Goodwin & Ahn, 2010). In this approach, readers focus on the structure of words and morphemes (i.e., meaningful word parts) to aid in pronouncing, spelling, and understanding the complex words they encounter while reading. The ability to segment and blend morphemes provides students with a strategy for both decoding novel multisyllabic words and more rapidly decoding familiar words in text. This improves overall reading fluency, which allows students to focus on reading comprehension.

When students are provided with MA instruction, studies have found that students make gains in a variety of reading related outcomes, including word reading, spelling, reading comprehension, and vocabulary (e.g., Apel & Diehm, 2013; Bowers et al., 2010; Carlisle, 2010; Goodwin & Ahn, 2013; Ramirez, Walton, & Roberts, 2013; Reed, 2008; Zoski & Erickson, 2017), with the biggest benefits for at-risk and struggling readers, as well as ML/ELs (Bowers et al., 2010; Carlisle, 2010; Goodwin & Ahn, 2013; Reed, 2008). For example, Goodwin and Ahn (2010) conducted a meta-analysis examining the effects of morphological interventions for students with learning differences and difficulties. They differentiated between groups of struggling learners and found that morphological interventions contributed to literacy gains for students with reading and learning disabilities, English language learners, and struggling readers. Others have suggested that morphological analysis instruction can also help close the vocabulary gap for ML/EL students by giving them access to a broader semantic network of words (Crosson, McKeown, Robbins, & Brown, 2019; Crosson et al., 2021). Overall, this research indicates that morphological interventions have the potential to contribute to improved reading outcomes for all students, with the biggest benefit for at-risk and struggling readers.

Links to Amplify CKLA

Amplify CKLA offers a wide range of activities for students designed to foster word consciousness and the flexibility of word use, including learning to recognize word parts, such as affixes and root words. In K–2, students study morphology in the context of decoding and spelling, learning the spellings and meanings of prefixes, suffixes, and inflectional endings. For example, in Grade 1, students learn about and practice changing nouns from singular to plural

(with the inflectional endings *–s* and *–es*), as well as the way some root words change when the suffixes *–ing* and *–ed* are added. Later in Grade 2, students learn the suffixes *–ful* and *–less* and use them to create new words.

Morphology instruction continues in Grades 3–5, where students study word parts, including prefixes, suffixes, root words, and word origins, as well as Greek and Latin roots. Students learn and apply advanced word analysis skills through lessons in spelling, morphology, and grammar. Oral and written activities present opportunities for students to apply these morphology skills as they tackle new vocabulary words, using the meanings of high-utility morphemes to help them understand the meaning of novel multimorphemic words. For example, during the morphology portion of the lessons in Grade 3, students learn the meanings of high-frequency morphemes, including the prefixes *un–*, *non–*, *re–*, and *pre–*. Students discuss how adding prefixes alters the meaning of root words and how the parts of speech of words may be affected. In Grade 5, students identify the meaning of words derived from the Latin root *vac* and practice using these words correctly in sentence contexts.

Sentences

The comprehension of sentences is a critical component of oral language that underpins a reader's ability to efficiently and accurately comprehend and compose written text, especially as sentences in texts become increasingly complex during the middle elementary years (e.g., Scott & Koonce, 2014; Tong, Yu, & Deacon, 2024). Compared to narrative texts, the demands of sentence-level comprehension and composition are notably higher in informational, or domain-specific, texts. Such texts include longer and more complex syntactic structures such as the passive voice and complex phrase and clause structures (see e.g., Scott & Koonce, 2014). To alleviate these comprehension and composition challenges of complex sentence structure, students, especially those who have weaker language skills, benefit from instruction that focuses on sentence-level comprehension and composition, including building syntactic awareness and learning the function and meanings of common connective words (Oakhill, Cain, & Elbro, 2015b; Scott, 2009; Scott & Koonce, 2014).

Syntactic awareness, or the explicit understanding of sentence structure, is a skill that allows students to consciously manipulate or judge word order within the context of a sentence based on the application of grammatical rules (Cain & Oakhill, 2007). It has a direct relationship with reading comprehension and independently facilitates the development of reading

comprehension over time (Deacon & Kieffer, 2018). Likewise, the effective construction of texts relies on syntactic awareness. Proficient readers use their explicit knowledge of word order as guidance to interpret the meaning of sentences; however, students with poor syntactic awareness have difficulty parsing sentences at appropriate syntactic boundaries, which hinders their ability to integrate text and monitor comprehension, negatively impacting overall reading comprehension (Nation & Snowling, 2000; Scott, 2009). Similarly, proficient writers utilize this syntactical knowledge to produce coherent texts, while students with poor syntactic knowledge struggle to produce texts that communicate clearly. To facilitate reading comprehension and writing composition, students should receive instruction and practice parsing and interpreting complex sentences through tasks that target syntactic awareness, such as detecting syntactic errors and building complex sentences with correct order and sentence structure (Scott, 2009; for a review, see Oakhill et al., 2015b).

Connectives are a special class of words that are essential for integrating information within and across sentences, as they signal that two pieces of information are related and provide insight into exactly how they are related (Cain & Nash, 2011). Students' understanding of the use of connectives and their meanings supports text comprehension through more efficient text processing and integration (Halliday & Hasan, 1976), especially for readers with limited background knowledge for a given text (McNamara, Songer, & Kintsch, 1996). One reason some students struggle with reading comprehension may be due to limited knowledge of the meaning and function of these words (Oakhill et al., 2015b).

Due to the unique function and special leverage connectives have for reading comprehension, instruction that simply defines the meaning of connectives is not enough. Instead, instruction should teach the meaning of connectives in context through varied examples (Crosson & Lesaux, 2013; Mesmer, 2017; Oakhill et al., 2015b). One way to increase students' syntactic awareness and understanding of connectives in context is through sentence combining (Scott, 2009; Oakhill et al., 2015b). The sentence-combining exercise allows students to practice identifying how two clauses are related by choosing the most appropriate connective to create a coherent sentence. Specifically, sentence-combining strategies embedded in real-world writing and reading experiences have been shown to have a positive effect on reading comprehension outcomes (e.g., Scott, 2009).

Links to Amplify CKLA

In Amplify CKLA, grammar instruction, including syntax, is an integral part of the curriculum, explicitly taught within the Skills Strand and reinforced through syntactic awareness activities in the Knowledge Strand. This emphasis on syntax and grammar is critical for developing students' oral and written language skills. By focusing on these areas, students learn to construct grammatically correct sentences, express themselves effectively, and enhance their comprehension of written texts. Instructional activities cover understanding parts of speech and their correct usage, analyzing and creating sentences, adding appropriate details to construct complex sentences, and practicing sentence combining for more advanced expression.

Amplify CKLA stresses the importance of sentence-level comprehension and composition throughout its units at every grade level. Instruction begins with oral activities that transition into writing, gradually building foundational skills as students advance. The curriculum includes explicit instruction on the four essential sentence types—declarative, interrogative, imperative, and exclamatory—integrated into each unit with a blend of oral practice and written exercises. Additionally, sentence-expansion activities teach students to enhance their comprehension of complex texts and enrich their writing by adding depth and clarity. Students learn to expand sentences using conjunctions and question words, which supports reading comprehension and enhances their written descriptions and explanations.

Furthermore, Amplify CKLA provides explicit instruction and practice with regular and irregular past-tense verbs through oral language exercises. Students explore the function of verbs and practice converting both regular and irregular forms to the past tense within sentence contexts, refining their understanding and application of grammatical concepts. This comprehensive approach to grammar instruction ensures that students develop the necessary language skills to succeed in both spoken and written communication.

Inference

Making inferences allows readers to fully understand a text by going beyond information that is explicitly stated. Inferencing skills are crucial for reading comprehension and have been demonstrated to predict reading comprehension, even after controlling for vocabulary, verbal IQ, and prior reading comprehension (Oakhill & Cain, 2007). A crucial type of inference is

gap-filling inference. These allow readers to use their background knowledge to fill in any discrepancies or gaps that the author may have left out. This type of inference enables readers to understand the underlying causes, relationships, motivations, or goals that are not explicitly stated, providing them with a deeper and more comprehensive understanding of the text as a whole (Oakhill et al., 2015c). As mentioned previously, students' level of background knowledge for a particular topic or domain has an impact on their ability to accurately make connections between information learned from the text and background knowledge (McCarthy et al., 2018; Miller, 2013).

Students also need to know when and how to activate background knowledge to "fill in the gaps" to make accurate inferences and comprehend the text as a whole (Cain and Oakhill, 1999). Research has found that students who struggle with reading comprehension tend to have difficulty integrating information within a text, as well as between the text and their background knowledge (see Johnston, Barnes, & Desrochers, 2008). Students may fail to apply the knowledge base they possess, or they may rely too heavily on their knowledge base, often missing the gist of the text because they struggle to apply perspectives outside of their own (Dore, Addendum, Golinkoff, & Hirsh-Pasek, 2018; Wilson et al., 2024).

Therefore, it is essential to offer students opportunities to practice making inferences with guidance. Research has found that instruction that guides students in making inferences during reading, with scaffolds as needed to probe the information that the author left out, is an effective approach for improving students' ability to make accurate inferences during reading (Elleman, 2017; Kendeou et al., 2020; McMaster et al., 2012; Oakhill et al., 2015c).

Links to Amplify CKLA

Research on text comprehension suggests that comprehension requires readers (or listeners) to employ various strategies—both implicit and explicit—to form inferences and establish connections among aspects of the text. Background knowledge is a crucial component for successfully applying these strategies. In Amplify CKLA, the focus is on knowledge building and having students use their growing knowledge to facilitate their analytical interactions with texts on the same topic. For example, within a domain, students will stay on a topic for approximately two to three weeks. By hearing Read-Alouds and/or reading texts on a single topic for such an extended period, students build vocabulary and knowledge that they can draw on when making predictions, monitoring known versus unknown information, considering

inconsistencies or differences among stories, integrating information within a text, and making gap-filling inferences. Teachers guide students' use of this knowledge through the questions and discussions that occur before the Read-Aloud.

Amplify CKLA instruction provides students with ample opportunities to practice making inferences both during and after reading or listening. Instruction and activities include text-dependent questions, as well as opportunities for written and spoken responses. Students are asked to answer text-dependent questions about literary and informational texts in daily reading and Read-Aloud instruction, both in discussions and written responses. These questions are identified as literal, inferential, and evaluative. Literal questions assess students' recall of key details from the text; they require students to paraphrase and/or refer back to the portion of the text where the specific answer is provided. Inferential questions ask students to infer information from the text, requiring them to summarize and/or reference the portions of the text that lead to and support the inference they are making. Evaluative questions ask students to build on what they have learned from the text, using analytical and application skills, often to form an opinion or make a judgment. They require students to paraphrase and/or cite textual evidence that substantiates their argument or opinion.

Text Structure

Proficient readers and writers use their knowledge of different types of text to help them build a coherent mental model of the texts they are reading and to create a mental model for readers of texts they write. The set of expectations about the internal structure of a text is constrained by its schema, or type (Mandler & Johnson, 1977). Each schema has its own set of rules that authors follow to organize the text, from overall topics to specific vocabulary and syntactic structures (Littlefair, 1991). As students become familiar with different types of texts, they become better at using the conventions of the schema to structure their learning, thus increasing their comprehension (Mandler & Johnson, 1977; Meyer & Rey, 2011). Additionally, knowledge of text types enhances their ability to create well-organized texts that effectively communicate the intended information.

Informational texts, in particular, are often complex and include difficult academic vocabulary (Pyle et al., 2017). One way readers make sense of these more challenging texts and writers learn to write them is by taking advantage of the similar ways these texts are often organized (Oakhill et al., 2015d). Some common informational text structures include sequence,

problem-solution, cause-and-effect, and compare-and-contrast. An awareness of these common patterns, or text structures, helps readers and writers connect ideas more effectively, thereby enhancing their understanding of the text and their ability to write texts of this kind (Oakhill et al., 2015d).

When students are taught about the different ways authors organize text, they are better able to recall details about texts and have better overall reading comprehension (Meyer & Ray, 2011; Pyle et al., 2017; Williams, 2005). When students are taught to use these techniques in their writing, their writing becomes clearer and more precise. Research has found the following instructional strategies to be effective for reading and writing: using graphic organizers; teaching students clue words that signal the type of text structure; asking questions that probe for structure-related information from the text; teaching more than one text type to highlight elements unique to each; and teaching students to produce summaries that include structure-related information from the text (e.g., Oakhill et al., 2015d; Otaiba, Connor, & Crowe, 2017; Roehling, Hebert, Nelson, & Bohaty, 2017; Williams, 2005).

Links to Amplify CKLA

Amplify CKLA emphasizes understanding text structure by providing instruction on diverse types, including narrative, informational/expository, and descriptive formats. The program helps students not only recognize the distinct features and organizational patterns of each structure but also understand how these choices impact both reading comprehension and writing composition. For instance, in the fourth-grade unit "The Road to Independence: The American Revolution," multiple texts and activities are included that teach students about producing and understanding informational text structures. Students engage in comparing and contrasting texts on the same topic, use the cause-and-effect structure to craft paragraphs, and interact with chronological texts, documenting information with timeline graphics.

In addition to these specific activities, exposure to a wide range of texts with varied structures helps students develop the skills needed to identify, analyze, and respond to different text types. This dual focus on reading and writing strengthens both comprehension and critical thinking, enabling students to appreciate how authors' structural choices affect the meaning and effectiveness of texts. Through these experiences, students become proficient in both interpreting complex readings and crafting well-organized and purpose-driven written works.

References

Al Otaiba, S., Connor, C. M., Folsom, J. S., Greulich, L., Meadows, J., and Li, Z. (2011). Assessment data- informed guidance to individualize kindergarten reading instruction: Findings from a cluster-randomized control field trial. *The Elementary School Journal, 111*(4), 535.

Anderson, R.C., & Freebody, P. (1981). Vocabulary knowledge. In J. Guthrie (Ed.), *Comprehension and teaching: Research reviews.* Newark, DE: International Reading Association.

Apel, K., & Diehm, E. (2013). Morphological awareness intervention with kindergarteners and first and second grade students from low SES homes: A small efficacy study. *Journal of Learning Disabilities, 47*(1), 65-75.

Apel, K., Wilson-Fowler, E. B., Brimo, D., & Perrin, N. A. (2012). Metalinguistic contributions to reading and spelling in second and third grade students. *Reading and Writing, 25*, 1283-1305.

Armbruster. B.B. (1992). Vocabulary in content area lessons. *The Reading Teacher, 45*(7), 550-551.

Aro, M. & Wimmer, H. (2003). Learning to read: English in comparison to six more regular orthographies. Applied Psycholinguistics, 24, 621-635.

August, D., Carlo, M., Dressler, C., and Snow, C. (2005). The critical role of vocabulary development for English language learners. *Learning Disabilities Research & Practice, 20*(1), 50-57.

Baddeley, A. (1992). Working memory. Science, 255(5044), 556–559.

Baker, D.L., Hao, M., Polanco, P, Conry, J.M., Kamata, A., Al Otaiba, S., … Cole, R. (2020). Development and promise of a vocabulary intelligent tutoring system for Second-Grade Latinx English learners. *Journal of Research on Technology in Education, 53*(2), 223-247.

Baker, L., & Wigfield, A. (1999). Dimensions of children's motivation for reading and their relations to reading activity and reading achievement. *Reading Research Quarterly, 34*(4), 452–477.

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. F*ocus on Exceptional Children, 42*(9), 1–20.

Bandura, A. (1997). *Self-efficacy: The Exercise of Control.* New York: W. H. Freeman.

Batsche, G. M., Curtis, M. J., Dorman, C., Castillo, J. M., and Porter, L. J. (2007). The Florida problem-solving/response to intervention model: implementing a statewide initiative. *Handbook of Response to Intervention,* 378–395. Springer US.

Beck, I. L., and McKeown, M. G. (2001). Text talk: capturing the benefits of read-aloud experiences for young children. *The Reading Teacher*, 10–20.

Beck, I. L., and McKeown, M. G. (2007). Increasing young low-income children's oral vocabulary repertoires through rich and focused instruction. *The Elementary School Journal, 107*(3), 251–271.

Beck, I.L., McKeown, M.G., & Kucan, L. (2013). *Bringing Words to Life: Robust Vocabulary Instruction.* New York: Guilford Press.

Byrnes, J. P., & Guthrie, J. T. (1992). Prior conceptual knowledge and textbook search. *Contemporary Educational Psychology, 17*(1), 8–29.

Beck, I.L., Perfetti, C.A., McKeown, M.G. (1982). Effects of long-term vocabulary instruction on lexical access and reading comprehension. *Journal of Educational Psychology, 74*(4), 506-521.

Blachman, B. A., Tangel, D. M., Ball, E. W., Black, R., & McGraw, C. K. (1999). Developing phonological awareness and word recognition skills: A two-year intervention with low-income, inner-city children. *Reading and Writing, 11*, 239-273.

Bowers, P., Kirby, J., Deacon, S.H. (2010). The effects of morphological instruction on literacy skills: A systematic review of the literature. *Review of Educational Research, 80*, 144-179.

Brabham, E. G. and Lynch-Brown, C. (2002). Effects of teachers' reading-aloud styles on vocabulary acquisition and comprehension of students in the early elementary grades. *Journal of Educational Psychology, 94*(3), 465.

Brady, S. A. (2011). Efficacy of phonics teaching for reading outcomes. *Explaining Individual Differences in Reading: Theory and Evidence,* 69.

Bravo, M.A., & Cervetti, G.N. (2008). Teaching vocabulary through text and experience. In A.E. Farstrup & S.J. Samuels (Eds.), *What research has to say about vocabulary instruction* (pp. 130-149). Newark, DE: International Reading Association.

Braynt, P., Nunes, T., & Bindman, M. (2000). The relations between children's linguistic awareness and spelling: The case of the apostrophe. *Reading and Writing: An Interdisciplinary Journal*, *12*, 253-276.

Cain, K. (2022). Children's reading comprehension difficulties. In C. Hulme, M. J. Snowling, & K. Nation (Eds.), *The Science of Reading: A Handbook*. (2 ed., pp. 298-322). Wiley-Blackwell.

Cain, K., & Nash, H. M. (2011). The influence of connectives on young readers' processing and comprehension of text. *Journal of Educational Psychology, 103*(2), 429.

Cain, K. & Oakhill, J.V. (1999). Inference making ability and its relation to comprehension failure in young children. *Reading and Writing, 11*(5), 489-503.

Cain, K., & Oakhill, J. (2007). Reading comprehension difficulties: Correlates, causes and consequences. In K. Cain & J. Oakhill (Eds.), *Children's comprehension problems in oral and written language: A cognitive perspective* (pp. 41-74). New York: Guilford Press.

Cain, K., & Oakhill, J. (2014). Reading comprehension and vocabulary: Is vocabulary more important for some aspects of comprehension? *L'année Psychologique, 114*, 647-662.

Cain, K., Oakhill, J., & Lemmon, K. (2005). The relation between children's reading comprehension level and their comprehension of idioms. *Journal of Experimental Child Psychology, 90*, 65-87.

Carlisle, J. F. (1995). Morphological awareness and early reading achievement. In L. B. Feldman (Ed.), *Morphological aspects of language processing* (pp. 189–209). Hillsdale, NJ: Erlbaum.

Carlisle, J. F. (2010). Effects of instruction in morphological awareness on literacy achievement: An integrative review. *Reading Research Quarterly, 45*(4), 464-487.

Carlisle, J. F., & Nomanbhoy, D. M. (1993). Phonological and morphological awareness in first graders. *Applied Psycholinguistics, 14*, 177–195.

Carnine, D., Silbert, J., Kame-enui, E.J., Tarver, S.G., & Jungjohann, K. (2006). *Teaching struggling and at-risk readers: A direct instruction approach.* Upper Saddle River, NJ: Pearson.

Catts, H., Adolf, S. M., & Weismer, S. E. (2006). Language deficits in poor comprehenders: A case for the simple view of reading. *Journal of Speech, Language, and Hearing Research, 49*, 278–293.

Cepeda, N. J., Pashler, H., Vul, E., Wixted, J. T., and Rohrer, D. (2006). Distributed practice in verbal recall tasks: a review and quantitative synthesis. *Psychological Bulletin, 132*(3), 354.

Cervetti, G.N., Pearson, P.D., Bravo, M.A., & Barber, J. (2006). Reading and writing in the service of inquiry-based science. In R. Douglas, M.P. Klentschy, & K. Worth (Eds.), *Linking science and literacy in the K-8 classroom* (pp. 221-244). Arlington, VA: National Science Teachers Association.

Cheatham, J., & Allor, J. (2012). The influence of decodability in early reading text on reading achievement: A review of the evidence. *Reading and Writing, 25*(9), 2223-2246.

Christensen, C. and Bowey, J. (2005) The Efficacy of Orthographic Rime, Grapheme-Phoneme Correspondence, and Implicit Phonics Approaches to Teaching Decoding Skills. Scientific *Studies of Reading, 9,* 327-349.

Clayton, F. J., West, G, Sears, C., Hulme, C., & Lervåg, A. (2020). A longitudinal study of early reading development: Letter-sound knowledge, phoneme awareness and RAN, but not letter-sound integration predict variations in reading development. *Scientific Studies of Reading, 24*(2), 91-107.

Connor, C. M., Morrison, F. J., Fishman, B. J., Schatschneider, C., & Underwood, P. (2007). Algorithm-guided individualized reading instruction. *Science, 315,* 464-465.

Connor, C., Piasta, S. B., Fishman, B., Glasney, S., Schatschneider, C., Crowe, E., and Morrison, F. J. (2009). Individualizing student instruction precisely: effects of child instruction interactions on first graders' literacy development. *Child Development, 80*(1), 77–100.

Conrad, N. J. (2008). From reading to spelling and spelling to reading: Transfer goes both ways. *Journal of Educational Psychology, 100*(4), 869-878.

Coyne, M. D., McCoach, B., & Kapp, S. (2007). Vocabulary intervention for kindergarten students: Comparing extended instruction to embedded instruction and incidental exposure. *Learning Disabilities Quarterly, 30*, 74-88.

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.

Crosson, A.C. & Lesaux, N.K. (2013). Does knowledge of connectives play a unique role in the reading comprehension of English learners and English-only students? *Journal of Research in Reading, 36*(3), 241-260.

Crosson, A. C., McKeown, M. G., Lei, P., Zhao, H., Li, X., Patrick, K., ... & Shen, Y. (2021). *Journal of Research in Reading, 44*(1), 154-174.

Crosson, A.C., McKeown, M.G., Robbins, K.P., & Brown, K.J. (2019). Key elements of robust vocabulary instruction for emergent bilingual adolescents. *Language, Speech, and Hearing Services in Schools, 50*, 493–505.

Cummings, K.D., Dewey, B., Latimer, R., & Good, R.H. (2011). Pathways to word reading and decoding: The roles of automaticity and accuracy. *School Psychology Review, 40*(2), 284–295.

Cunningham, A. E. (2005). Vocabulary growth through independent reading and reading aloud to children. *Teaching and Learning Vocabulary: Bringing Research to Practice*, 45–68.

Cunningham, A. E., and Stanovich, K. E. (1991). Tracking the unique effects of print exposure in children: associations with vocabulary, general knowledge, and spelling. *Journal of Educational Psychology, 83*(2), 264.

Cunningham, A. E., and Stanovich, K. E. (1997). Early reading acquisition and its relation to reading experience and ability ten years later. *Developmental Psychology, 33*(6), 934.

D'angiulli, A., Siegel, L. S., and Maggi, S. (2004). Literacy instruction, SES, and word-reading achievement in English-language learners and children with English as a first language: a longitudinal study. *Learning Disabilities Research & Practice, 19*(4), 202–213.

Deacon, S., Campbell, E., Tamminga, M., & Kirby, J. (2010). Seeing the *harm* in *harmed* and *harmful*: Morphological processing by children in grades 4, 6, and 8. *Applied Psycholinguistics, 31*, 759-775.

Deacon, S. H., & Kieffer, M. (2018). Understanding how syntactic awareness contributes to reading comprehension: Evidence from mediation and longitudinal models. *Journal Of Educational Psychology, 110*(1), 72-86.

Deacon, S. H., & Kirby, J. R. (2004). Morphological awareness: Just 'more phonological'? The roles of morphological and phonological awareness in reading development. *Applied Psycholinguistics, 25*, 223-238.

de Graff, S., Bosman, A.M.T., Hasselman, F., & Verhoeven, L. (2009). Benefits of systematic phonics instruction. Scientific Studies of Reading, 13(4), 318-333.

Dickinson, D. K., & Smith, M. W. (1994). Long-term effects of preschool teachers' book readings on low-income children's vocabulary and story comprehension. *Reading Research Quarterly, 29*, 104–123.

Duke, N. K., & Cartwright, K. B. (2021). The science of reading progresses: Communicating advances beyond the simple view of reading. Reading Research Quarterly, 56, S25-S44. https://doi.org/10.1002/rrq.411

Duke, N. K., & Pearson, P. D. (2008). Effective practices for developing reading comprehension. *Journal of Education*, 107–122.

Ehri, L. C. (2005). Development of Sight Word Reading: Phases and Findings. In M. J. Snowling, & C. Hulme (Eds.), *The Science of Reading*: *A Handbook.* (pp. 135-154). Oxford: Blackwell Publishing.

Ehri, L. C., Nunes, S. R., Willows, D. A., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: evidence from the National Reading Panel's meta- analysis. *Reading Research Quarterly, 36,* 250–287.

Elleman, E.M. (2017). Examining the impact of inference instruction on the literal and inferential comprehension of skilled and less skilled readers: A meta-analytic review. *Journal of Educational Psychology, 109*(6), 761-781.

Elleman, A. M., Lindo, E. J., Morphy, P., and Compton, D. L. (2009). The impact of vocabulary instruction on passage-level comprehension of school-age children: a meta-analysis. *Journal of Research on Educational Effectiveness, 2*(1), 1–44.

Ellis, N., Natsume, M., Stavropoulou, K., Hoxhallari, L., van Daal, V., Polyzoe, N., Tsipa, M, & Petalas, M. (2004). The effects of orthographic depth on learning to read alphabetic, syllabic, and logographic scripts. *Reading Research Quarterly, 39*, 438–468.

Fien, H., Nelson, N. J., Smolkowski, K., Kosty, D., Pilger, M., Baker, S. K., & Smith, J. L. M. (2021). A Conceptual Replication Study of the Enhanced Core Reading Instruction MTSS-Reading Model. *Exceptional Children, 87*(3), 265-288.

Fitzgerald, J. & Shanahan, T. (2000). Reading and Writing Relationships and their Development. Educational Psychologist. 35. 39-50. 10.1207/S15326985EP3501_5.

Fletcher, J. M., and Vaughn, S. (2009). Response to intervention: preventing and remediating academic difficulties. Child Development Perspectives, 3(1), 30–37.

Foorman, B.R., Francis, D.J., Beeler, T., Winikates, D., & Fletcher, J.M. (1997). Early Interventions for Children With Reading Problems: Study Designs and Preliminary Findings. *Learning Disabilities: a Multidisciplinary Journal, 8*, 63-71.

Fuchs, D., and Fuchs, L. S. (2006). Introduction to response to intervention: what, why, and how valid is it? *Reading Research Quarterly, 41*(1), 93–99.

Fuchs, L.S., Fuchs, D., Hosp, M.K., & Jenkins, J.R. (2001). Oral reading fluency as an indicator of reading competence: A theoretical, empirical, and historical analysis. *Scientific Studies of Reading, 5*(3), 239-256.

García, 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.

Gellert, A. S., Arnbak, E., Wischmann, S., & Elbro, C. (2021). Morphological intervention for students with limited vocabulary knowledge: Short‐and long‐term transfer effects. *Reading Research Quarterly, 56*(3), 583-601.

Gerbier, E., and Toppino, T. C. (2015). The effect of distributed practice: neuroscience, cognition, and education. *Trends in Neuroscience and Education.*

Gersten, R. M., Beckmann, S., Clarke, B., Foegen, A., March, L., Star, J. R., & Witzel, B. (2009). Assisting students struggling with mathematics: Response to intervention (RtI) for elementary and middle schools (Report No. NCEE 2009-4060). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Goodwin, A., & Ahn, S. (2010). A meta-analysis of morphological interventions: effects on literacy achievement of children with literacy difficulties. *Annals of Dyslexia, 60*, 183-208.

Goodwin, A., & Ahn, S. (2013). A meta-analysis of morphological interventions in English: Effects on literacy outcomes for school-age children. *Scientific Studies of Reading, 17*(4), 257-285.

Goodwin, A., Lipsky, M, & Ahn, S. (2012). Word detectives: Using units of meaning to support literacy. *The Reading Teacher, 65*, 461-470.

Goswami, U. (2005). Synthetic Phonics and Learning to Read: A Cross-language Perspective. *Educational Psychology in Practice, 21*(4), 273–282.

Graesser, A. C., Millis, K., and Graesser, A. (2011). Discourse and cognition. *Discourse Studies: A Multidisciplinary Introduction* (Van Dijk, T. A. ed.), 126–142. London: Sage.

Graesser, A.C., Singer, M., & Trabasso, T. (1994). Constructing inferences during narrative text comprehension. *Psychological Review*, 101(3), 371-395.

Graves, M.F., & Penn, M.C. (1986). Costs and benefits of various methods of teaching vocabulary. *Journal of Reading, 29* (7), 596-602.

Halliday, M.A.K. & Hasan, R. (1976). *Cohesion in English*. London: Longmans.

Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore, MD: Brookes.

Haskell, D. W., Foorman, B. R., & Swank, P. R. (1992). Effects of three orthographic/phonological units on first-grade reading. *Remedial and Special Education*, 13, 40-49.

Hindman, A. H., Wasik, B. A., & Erhart, A. C. (2012). Shared book reading and Head Start preschoolers' vocabulary learning: The role of book-related discussion and curricular connections. *Early Education and Development, 23*, 451–474.

Hoover, W. A., & Gough, P. B. (1990). The simple view of reading. *Reading and Writing, 2*, 127–160.

Hudson, R.F., Pullen, P.C., Lane, H.B., & Torgesen, J.K., (2009). The complex nature of reading fluency: A multidimensional view. *Reading & Writing Quarterly, 25*(1), 4-32.

Hulme, C., Bowyer-Crane, C., Carroll, J. M., Duff, F. J., & Snowling, M. J. (2012). The causal role of phoneme awareness and letter-sound knowledge in learning to read: combining intervention studies with mediation analyses. *Psychological Science, 23*(6), 572-577.

Hwang, H., Cabell, S.Q., & Joyner, R.E. (2022) Effects of integrated literacy and content-area instruction on vocabulary and comprehension in the elementary years: A meta-analysis. *Scientific Studies of Reading, 26*(3), 223-249.

Hwang, H. & Duke, N.K. (2020). Content counts and motivation matters: Reading comprehension in third grade students who are English learners. *AERA Open, 6*(1), 1-17.

Hwang, H., McMaster, K.L., & Kendeou, P. (2022). A longitudinal investigation of directional relations between domain knowledge and reading in the elementary years. *Reading Research Quarterly, 58*(1), 59-77

James, E., Currie, N.K., Tong, S.X., & Cain, K. (2020). The relations between morphological awareness and reading comprehension in beginner readers to young adolescents. *Journal of Research in Reading, 44*(1), 110-130.

James, K. H., & Engelhardt, L. (2012). The effects of handwriting experience on functional brain development in pre-literate children. *Trends in neuroscience and education, 1*(1), 32-42.

Jenkins, J. R., Peyton, J. A., Sanders, E. A., & Vadasy, P. F. (2004). Effects of Reading Decodable Texts in Supplemental First-Grade Tutoring. *Scientific Studies of Reading, 8*(1), 53-85.

Johnson, D.D., Moe, A.J., & Baumann, J.F. (1983). *The Ginn word book for teachers: A basic lexicon*. Boston: Ginn.

Johnston, A., Barnes, M., & Desrochers, A. (2008). Reading comprehension: Developmental processes, individual differences, and intervention. *Canadian Psychology, 40*(2), 125-132.

Johnston, Rhona S., McGeown, S., and Watson, J. E. (2012).Long term effects of synthetic versus analytic phonics teaching on the reading and spelling ability of 10 year old boys and girls. *Reading and Writing, 25*(8), 1365–1384.

Johnston, R.S., Watson, J.E. Accelerating the development of reading, spelling and phonemic awareness skills in initial readers. *Reading and Writing 17,* 327–357 (2004).

Joshi, M., Treiman, R., Carreker, S., & Moats, L. C. (2008). How words cast their spell: Spelling is an integral part of learning the language, not a matter of memorization. *American Educator, Winter 2008-2009,* 5-16.

Juel, C., & Roper/Schneider, D. (1985). The influence of basal readers on first grade reading. *Reading Research Quarterly, 20*(2), 134-134.

Just, M. A., Carpenter, P. A., and Keller, T. A. (1996). The capacity theory of comprehension: new frontiers of evidence and arguments. *Psychological Review, 103*(4), 773–780.

Kendeou, P., & O'Brien, E. J. (2016). Prior knowledge: Acquisition and revision. In P. Afflerbach (Ed.), *Handbook of individual differences in reading: Reader, text, and context* (1st ed., pp. 151–163). Routledge.

Kim, Y.G. (2020). Toward integrative reading science: The direct and indirect effects model of reading. *Journal of Learning Disabilities, 53*(6), 469-491.

Kim, J. S., Burkhauser, M. A., Relyea, J. E., Gilbert, J. B., Scherer, E., Fitzgerald, J., Mosher, D., & McIntyre, J. (2023). A longitudinal randomized trial of a sustained content literacy intervention from first to second grade: Transfer effects on students' reading comprehension. *Journal of Educational Psychology, 115*(1), 73–98.

Kintsch, W. (1998). *Comprehension: A Paradigm for Cognition*. Cambridge University Press.

LaBerge, D., & Samuels, S. J. (1974). Towards a theory of automatic information processing in reading. *Cognitive Psychology, 6*, 293-323.

Littlefair, A. (1991). *Reading All Types of Writing: The Importance of Genre and Register for Reading Development.* Milton Keynes: Open University Press.

Mandler, J.M., & Johnson, N.S. (1977). Remembrance of things parsed: Story structure and recall. *Cognitive Psychology, 9*, 111-151.

Manyak, P. C., Baumann, J. F., & Manyak, A. M. (2018). Morphological analysis instruction in the elementary grades: Which morphemes to teach and how to teach them. *The Reading Teacher*.

McCandliss, B.D., Beck, I., Sandak, R., & Perfetti, C. (2003). Focusing attention on decoding for children with poor reading skills: A study of the Word Building intervention. Scientific Studies of Reading.7(1),75-105.

McCarthy, K. S., Guerrero, T. A., Kent, K. M., Allen, L. K., McNamara, D. S., Chao, S. F., Steinberg, J., O'Reilly, T., & Sabatini, J. (2018). Comprehension in a scenario-based assessment: Domain and topic-specific background knowledge. *Discourse Processes, 55*(5–6), 510–524.

McCarthy, K.S., & McNamara, D.S. (2021). The multidimensional knowledge in text comprehension framework. *Educational Psychologist, 56*(3), 196-214.

McGinty, A. S., Breit-Smith, A., Justice, L.M., Kaderavek, J., Fan, X. (2011). Does intensity matter? Preschoolers' print knowledge development with a classroom-based intervention. *Early Childhood Research Quarterly, 26*, 255–267.

McKeown, M.G., Beck, I.L., & Sandora, S. (2012). Direct and rich vocabulary instruction needs to start early. In E.J. Kame'enui & J.F. Baumann (Eds.), *Vocabulary Instruction: Research to Practice.* New York: The Guilford Press.

McMaster, K.L., van den Broek, P., Espin, C.A., White, M.J., Rapp, D.N., Kendeou, P., Bohn-Gettler, C.M., & Carlson, S. (2012). Making the right connections: Differential effects of reading intervention for subgroups of comprehenders. *Learning and Individual Differences, 22*, 100-111.

McNamara, D. S. (Ed.). (2007). *Reading comprehension strategies: Theories, interventions, and technologies*. Lawrence Erlbaum Associates Publishers

McNamara, D.S., Kintsch, E., Songer, N.B., & Kintsch, W. (1996). Are good texts always better? Interactions of text coherence, background knowledge, and levels of understanding in learning from text. *Cognition and Instruction, 14*(1), 1-43.

McPherron, P. & Randolph, P.T. (2014). *Cat Got Your Tongue? Recent Research and Classroom Practices for Teaching Idioms to English Learners Around the World.* Alexandria, VA: TESOL Press.

Mesmer, H.A.E. (2001). Decodable text: A review of what we know. *Reading Research and Instruction, 40*(2),121-142.

Mesmer, H.A. (2017). Connectives in sentences. In *Teaching Skills for Complex Text: Deepening Close Reading in the Classroom.* New York: Teachers College Press.

Meyer, B.F., & Ray, M.N. (2011). Structure strategy interventions: Increasing reading comprehension of expository text. *International Electronic Journal of Elementary Education, 4*(1), 127-152.

Miller, B. A. (2013). Joining forces: A collaborative study of curricular integration. *International Journal of Education & the Arts, 14*, 1–24.

Morrow, L.M. (2003). Motivating lifelong voluntary readers. *Handbook of Research on Teaching the English Language Arts* (second edition, J. Flood, D. Lapp, J. Squire, and Jensen, Eds.), 857–867.) Mahwah, NJ: Erlbaum.

Mosher, D. & Kim, J. (2024). Building a science of teaching reading and vocabulary: Experimental effects of structured supplements for a read aloud lesson on third graders' domain-specific reading comprehension. *Scientific Studies of Reading*, DOI: 10/1080/10888438-2024.2368145.

Nagy, W.E. (1988). *Teaching vocabulary to improve reading comprehension.* Newark: DE: International Reading Association.

Nagy, W.E., Anderson, R.C., & Herman, P.A. (1987). Learning word meanings from context during normal reading. *American Educational Research Journal, 24*(2), 237-270.

Nation, K., & Snowling, M.J. (2000). Factors influencing syntactic awareness skills in normal readers and poor comprehenders. *Applied Psycholinguistics, 21,* 229-241.

National Institute of Child Health and Human Development (NICHD).) (2000). *Report of the National Reading Panel. Teaching Children to read: An evidence-based assessment of scientific research literature on reading and its implications for reading instruction. Report of the subgroups* (NIH Publication No. 00-4754). Washington DC: US. Government Printing Office.

National Institute of Child Health and Human Development Early Child Care Research Network (2005). Pathways to reading; the role of oral language in the transition to reading. *Developmental Psychology, 41*, 41:428–442

Neuman, S. B., and Dwyer, J. (2009). Missing in action: Vocabulary instruction in pre-K. *The Reading Teacher, 62*(5), 384–392.

Nippold, M.A. (1991). Evaluating and enhancing idiom comprehension in language-disordered students. *Language, Speech, and Hearing Services in Schools, 22*, 100-106.

Nunes, T., Bryant, P., & Bindman, M. (2006). The effects of learning to spell on children's awareness of morphology. *Reading and Writing, 19*, 767–787.

Oakhill, J., & Cain, K. (2007). Introduction to comprehension development. In K. Cain & J. Oakhill (Eds.), *Children's comprehension problems in oral and written language: A cognitive perspective* (pp. 3-40). New York: Guilford Press.

Oakhill, J., Cain, K., & Elbro, C. (2015a). Knowing and learning the meaning of words. In *Understanding and teaching reading comprehension: A handbook* (pp.54-68). New York: Routledge.

Oakhill, J., Cain, K., & Elbro, C. (2015b). Sentences and their connections. In *Understanding and teaching reading comprehension: A handbook* (pp.69-81). New York: Routledge.

Oakhill, J., Cain, K., & Elbro, C. (2015c). Going beyond explicit details to make sense of text. In *Understanding and teaching reading comprehension: A handbook* (pp.38-53). New York: Routledge.

Oakhill, J., Cain, K., & Elbro, C. (2015d). Finding and using text structure when reading. In *Understanding and teaching reading comprehension: A handbook* (pp. 82-93). New York: Routledge.

Oakhill, J., Cain, K., & McCarthy, D. (2015). Inference processing in children: The contributions of depth and breadth of vocabulary knowledge. In *Inferences During Reading* (pp.140-159). Cambridge University Press, Cambridge.

Otaiba, S.L., Connor, C.M., & Crowe, E. (2017). Promise and feasibility of teaching expository text structure: A primary grade pilot study. *Reading & Writing,* Advance online publication.

Ouellette, G. P. (2006). What's meaning got to do with it: the role of vocabulary in word reading and reading comprehension. J*ournal of Educational Psychology, 98*(3), 554.

Ouellette, G. (2010). Orthographic learning in learning to spell: The roles of semantics and type of practice. *Journal of Experimental Child Psychology, 107*, 50-58.

Pentimonti, J. M., and Justice, L. M. (2010). Teachers' use of scaffolding strategies during read alouds in the preschool classroom. *Early Childhood Education Journal, 37*(4), 241–248.

Perfetti, C. A., Beck, I., Bell, L., & Hughes, C. (1987). Phonemic knowledge and learning to read are reciprocal: A longitudinal study of first grade children. *Merrill-Palmer Quarterly,* 33, 283–319.

Pikulski, J. J., & Chard, D. J. (2005). Fluency: Bridge between decoding and reading comprehension. *The Reading Teacher 58*(6), 510-519.

Pinnell, G.S., & Jagger, A.M. (2003). Oral language: speaking and listening in elementary classrooms. *Handbook of Research on Teaching the English Language Arts* (second edition, J. Flood, D. Lapp, J. Squire, and Jensen, Eds.), 88–913. Mahwah, NJ: Erlbaum.

Proctor-Williams, K. (2009). Dosage and distribution in morphosyntax intervention: current evidence and future needs. *Topics in Language Disorders, 29*(4), 294–311.

Pyle, N. et al. (2017). Effects of expository text structure interventions on comprehension: A meta-analysis. *Reading Research Quarterly*, *52*(4), 469-501.

Ramirez, G., Walton, P., & Roberts, W. (2013). Morphological awareness and vocabulary development among kindergarteners with different ability levels. *Journal of Learning Disabilities, 47*(1), 54-64.

Rapp, D.N., van den Broek, P., McMaster, K.L., Kendeou, P, & Espin, C.A. (2007). Higher-order comprehension processes in struggling readers: A perspective for research and intervention. *Scientific Studies of Reading, 11*(4), 289-312.

Rasinski, T., Homan, S., & Biggs, M. (2009). Teaching reading fluency to struggling readers: Method, materials, and evidence. Reading & Writing Quarterly, 25(2-3), 192-204.

Recht, D. & Leslie, L. (1988). Effect of prior knowledge on good and poor readers' memory of text. *Journal of Educational Psychology, 80*, 16–20.

Reed, D.K. (2008). A Synthesis of Morphology Interventions and Effects on Reading Outcomes for Students in Grades K–12. *Learning Disabilities Research & Practice, 23*, 36–49.

Rehder, B., & Hastie, R. (2004). Category coherence and category-based property induction. *Cognition, 91*(2), 113–153.

Ricketts, J., Nation, K., & Bishop, V. M. (2007). Vocabulary is important for some, but not all reading skills. *Scientific Studies of Reading, 11*, 235-257.

Ritchey, K.D., & Speece, D.L. (2006). From letter names to word reading: The nascent role of sublexical fluency. *Contemporary Educational Psychology, 31,* 301-327.

Roehling, J.V., Hebert, M., Nelson, J.R., & Bohaty, J.J. (2017). Text structure strategies for improving expository reading comprehension. The Reading Teacher, 71(1), 71-82.

Roman, A.A., Kirby, J.R., Parrila, R.K., Wade-Wooley, L, & Deacon, S.H. (2009). Toward a comprehensive view of the skills involved in word reading in Grades 4, 6, and 8. *Journal of Experimental Child Psychology, 102*, 96-113.

Samuels, S. J. (1979). The method of repeated readings. *The Reading Teacher*, *41*, 756–760.

Santoro, L. E., Chard, D. J., Howard, L., and Baker, S. K. (2008). Making the very most of classroom read-alouds to promote comprehension and vocabulary. *The Reading Teacher, 61*(5), 396–408.

Savage, R., Georgiou, G., Parrila, R, Maiorino, K, Dunn, K, & Burgos, G. (2020). The effects of teaching complex grapheme-phoneme correspondences: Evidence from a dual site cluster trial with at-risk grade 2 students. *Scientific Studies of Reading, 24*(4)., 321-337.

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). New York, NY: Guilford Press.

Scarborough, H. S., and Dobrich, W. (1994). On the efficacy of reading to preschoolers. *Developmental Review, 14*(3), 245–302.

Schuele, C.M. & Boudreau, D. (2008). Phonological awareness instruction: Beyond the basics. *Language, Speech, and Hearing Services in Schools, 39*(1), 3-20.

Scott, C. M. (2009). A case for the sentence in reading comprehension. *Language, Speech, & Hearing Services in Schools, 40*(2), 184-191.

Scott, C.M., & Koonce, N.M. (2014). Syntactic contributions to literacy learning. In C.A. Stone, E.R. Silliman, B.J. Ehren, & G.P. Wallach (Eds.), *Handbook of Language & Literacy: Development and Disorders* (2nd ed., pp. 283-301). New York, NY: Guilford.

Sénéchal, M. (2006). Testing the home literacy model: parent involvement in kindergarten is differentially related to grade 4 reading comprehension, fluency, spelling, and reading for pleasure. *Scientific Studies of Reading, 10*(1), 59–87.

Sénéchal, M., & LeFevre, J. A. (2002). Parental involvement in the development of children's reading skill: a five-year longitudinal study. *Child Development, 73*(2), 445–460.

Share D. L. (1995). Phonological recoding and self-teaching: sine qua non of reading acquisition. *Cognition, 55*(2), 15–226.

Silverman, R. D., Speece, D. L., Harring, J. R., & Ritchey, K. D. (2013). *Fluency Has a Role in the Simple View of Reading. Scientific Studies of Reading, 17*(2), 108–133.

Smith S. B., Simmons, D. C., & Kame'enui, E. J. (1998). Phonological awareness: Instructional and curricular basics and implications. In D. C. Simmons & E. J. Kame'enui (eds.), *What reading research tells us about children with diverse learning needs: Bases and basics.* Mahwah, NJ: Lawrence Erlbaum Associates.

Snow, C. E., Burns, M. S., & Griffin, P. (Eds.) (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.

Stahl, S. A., & Nagy, W. E. (2006). *Teaching word meanings.* Lawrence Erlbaum Associates Publishers.

Stevens, E. A., Walker, M. A., & Vaughn, S. (2017). The Effects of Reading Fluency Interventions on the Reading Fluency and Reading Comprehension Performance of Elementary Students With Learning Disabilities: A Synthesis of the Research from 2001 to 2014. *Journal of learning disabilities, 50*(5), 576–590.

Steyvers, M., & Tenenbaum, J. B. (2005). The large-scale structure of semantic networks: Statistical analysis and a model of semantic growth. *Cognitive Science, 29*, 41-78.

Storch, S.A., and Whitehurst, G.J. (2002). Oral language and code-related precursors to reading: evidence from a longitudinal structural model. *Developmental Psychology, 38*, 934–947.

Sticht, T. G., & James, J. H. (1984). Listening and reading. In P. D. Pearson, R. Barr, M. L. Kamil, & P. Mosenthal (Eds.), *Handbook of reading research* (pp. 293-317). New York: Longman.

Sunde, K., Furnes, B., & Lundetræ, K. (2020). Does introducing the letters faster boost the development of children's letter knowledge, word reading and spelling in the first year of school? *Scientific Studies of Reading, 24*(2), 141-158.

Teale, W. H. (2003). Reading aloud to young children as a classroom instructional activity: insights from research and practice. *On Reading Books to Children: Parents and Teachers* (A. Van Kleeck, S. A. Stahl, and E. B. Bauer, Eds.), 114–139. Mahwah, NJ: Lawrence Erlbaum.

Therrien, W. J. (2004). Fluency and comprehension gains as a result of repeated reading: A meta-analysis. *Remedial and Special Education, 25*(4), 252–261.

Tong, X., Yu, L., & Deacon, S.H. (2024). A meta-analysis of the relation between syntactic skills and reading comprehension: A cross-linguistic and developmental investigation. *Review of Educational Research,* https://doi.org/10.3102/00346543241228185

Toppino, T. C., and Gerbier, E. (2014). About practice: repetition, spacing, and abstraction. *The Psychology of Learning and Motivation, 60,* 113–189.

Torgesen, J.K. (2006). Recent discoveries from research on remedial interventions for children with dyslexia. *The Science of Reading: A Handbook* (M. Snowling and C. Hulme, Eds.). Oxford: Blackwell Publishers.

Torgesen, J.K.,. Wagner, R.K., & Rashotte, C.A. (1999). Longitudinal studies of phonological processing and reading. *Journal of Learning Disabilities, 27*(5), 276-286.

Torgesen, J. K., Alexander, A. W., Wagner, R. K., Rashotte, C. A., Voeller, K. K., & Conway, T. (2001). Intensive remedial instruction for children with severe reading disabilities: immediate and long-term outcomes from two instructional approaches. *Journal of learning disabilities*, *34*(1), 33–78.

Treiman, R., Mullennix, J., Bijeljac-Babic, R., and Richmond-Welty, E. D. (1995). The special role of rimes in the description, use, and acquisition of English orthography. *Journal of Experimental Psychology: General, 12*4(2), 107–136.

Troia, G.A. (1999). Phonological awareness intervention research: A critical review of the experimental methodology. *Reading Research Quarterly, 34*, 28-52.

Usher, E. L., and Pajares, F. (2008). Sources of self-efficacy in school: critical review of the literature and future directions. *Review of Educational Research, 78*(4), 75–796.

Vadasy, P., Sanders, E., & Peyton, J. (2005). Relative effectiveness of reading practice or word-Level instruction in supplemental tutoring: How text matters. *Journal of Learning Disabilities, 38*(4), 364-364.

Van Kleeck, A. (2003). Research on book sharing: Another critical look. In A. van Kleeck, S. A. Stahl, and E. B. Bauer (Eds.), *On reading books to children*, 27–320, Mahwah, NJ: Earlbaum.

Van Kleeck, A., Vander Woude, J., & Hammett , L. (2006). Fostering literal and inferential language skills in Head Start preschoolers with language impairment using scripted book-sharing discussions. *American Journal of Speech-Language Pathology, 15*(1), 85–95.

Vaughn, S. (2007). Effective interventions for English language learners (Spanish-English) at risk for reading difficulties. *Handbook of Early Literacy Research, 2,* 185.

Vellutino, F. R., Tunmer, W. E., Jaccard, J. J., and Chen, R. (2007). Components of reading ability: multivariate evidence for a convergent skills model of reading development. *Scientific Studies of Reading, 1*1(1), 3–32.

Venegas, E. M., & Guanzon, A. (2023). A Planning Tool for Improving Interactive Read-Alouds: Why and How. *The Reading Teacher, 7*7(2), 207-216.

Walton, P. D., Walton, L. M., & Felton, K. (2001). Teaching rime analogy or letter recoding reading strategies to pre-readers: Effects on pre-reading skills and word reading. *Journal of Educational Psychology, 93,* 160–180.

White, T. G., Power, M. A., & White, S. (1989). Morphological analysis: Implications for teaching and understanding vocabulary growth. *Reading Research Quarterly*, 283-304.

White, T. G., Sowell, J., & Yanagihara, A. (1989). Teaching elementary students to use word-part clues. *The Reading Teacher*, *42*(4), 302-308.

Williams, J.P. (2005). Instruction in reading comprehension for primary-grade students: A focus on text structure. *The Journal of Special Education, 39*(1), 6-18.

Willingham, D. T. (2006). How knowledge helps. *American Educator, 30*(1), 30–37.

Willingham, D. (2009). Why don't students like school? *The Teachers College Record.*

Willingham, D.T. (2017). *The Reading Mind: A Cognitive Approach to Understanding How the Mind Reads.* Jossey-Bass.

Wilson, E., Cain, K., Davies, C., Gibson, J., Joseph, H., Serratrice, L., & Vogelzang, M. (2024). Children's development of conversational and reading inference skills: A call for a collaborative approach. *Language Development Research, 4*(1), 42-79.

Wimmer, H., & Goswami, U. (1994). The influence of orthographic consistency on reading development: Word recognition in English and German children. *Cognition, 51*(1), 91-103.

Wolter, J. A., Wood, A., & D'zatko, K. W. (2009). The influence of morphological awareness on the literacy development of first-grade children. *Language, Speech, and Hearing Services in Schools, 40*, 286-298.

Wright, T.S., Cervetti, G.N., Wise, C., & McClung, N.A. (2002). The impact of knowledge-building through conceptually-coherent read alouds on vocabulary and comprehension. *Reading Psychology, 43*(1), 70-84.

Wyse, D., and Goswami, U. (2008). Synthetic phonics and the teaching of reading. British *Educational Research Journal, 34*(6), 691–710.

Yuill, N. (2009). The relation between ambiguity understanding and metalinguistic discussion of joking riddles in good and poor comprehenders: Potential for intervention and possible processes of change. *First Language, 29*(1), 65-79.

Ziegler, J. C., and Goswami, U. (2005). Reading acquisition, developmental dyslexia, and skilled reading across languages: a psycholinguistic grain size theory. *Psychological Bulletin, 131*(1), 3–29.

Zipke, M. (2008). Teaching metalinguistic awareness and reading comprehension with riddles. *The Reading Teacher, 62*(2), 128-137.

Zipke, M., Ehri, L.C., & Smith Cairns, H. (2009). Using semantic ambiguity training to improve third graders' metalinguistic awareness and reading comprehension: An experimental study. *Reading Research Quarterly, 44*(3), 300-321.

Zoski, J.L., & Erickson, K.A. (2017). Multicomponent linguistic awareness intervention for at-risk kindergarteners. *Communication Disorders Quarterly, 38*(3), 161-171.

Zucker, T. A., Justice, L. M., Piasta, S. B., and Kaderavek, J. N. (2010). Preschool teachers' literal and inferential questions and children's responses during whole-class shared reading. *Early Childhood Research Quarterly, 25*(1), 65–83.