K–3 Literacy Guidance Framework

Instruction, Assessment, and Intervention

Wyoming Department of Education

122 W. 25th St., Ste. E200 | Cheyenne, WY 82002

P: 307-777-7675 | F: 307-777-6234 | edu.wyoming.gov

Compiled by the Wyoming Department of Education Technical Content Expert Team and the Region 11 Comprehensive Center (R11CC) at McREL International in 2021 and updated 2024 by the Wyoming Department of Education:

Dr. Cynthia (Cindy) Helen Brock, Wyoming Excellence in Higher Education Professor of Literacy Education, University of Wyoming

Dr. Richard Carter, Assistant Professor of Special Education, School of Counseling, Leadership, Advocacy, and Design, University of Wyoming

Betsy Callaway, administrative specialist, McRELInternational Tracie Corner, consultant, McREL International

Dr. Brian Gearin, Research Assistant, University of Oregon Center on Teaching and Learning Andrea Gilbertson, Principal, Shoshoni Elementary School, Fremont County School District #24

Antoinette Hallam, English Learner and Foreign Language Consultant, Wyoming Department of Education

Shelley Hamel, Chief Academic Officer, Wyoming Department of Education

Dr. Barbara Hickman, Assistant Professor, School of Counseling, Leadership, Advocacy, and Design, University of Wyoming

Jane Hill, Managing Consultant, McREL International

Dr. Tiffany Hunt, Academic Professional Lecturer, School of Counseling, Leadership, Advocacy, and Design, University of Wyoming

Dr. Dan Jesse, Principal Analyst, Western Educational Equity Assistance Center

Kimberly Lane, Literacy Supervisor, Wyoming Department of Education

Kimberli McWhirter, Member, Region 7 Comprehensive Center and Research Associate, RMC Research Corporation

Lori Pusateri-Lane, ELA and Fine and Performing Arts Consultant, Wyoming Department of Education Erin Pzinski, K–12 literacy facilitator, Weston County School District #1

Amy Reyes, Early Learning Specialist, Wyoming Department of Education

Dr. Dana A. Robertson, Director of the Literacy Research Center and Clinic, Associate Professor of Literacy, School of Teacher Education, University of Wyoming

Susan Shebby, R11CC Deputy Director, South Dakota Project co-lead, Managing Evaluator, McREL International

Susan Shipley, Special Education Systems Administrator, Wyoming Department of Education Joe Simpson, R11CC senior director, McREL International, WY Project Lead

Becky Symes, Instructional Facilitator, Uinta County School District #1, Wyoming

With assistance from the Wyoming Department of Education Practitioner Review Committee:

Review Committee: Julee Cobb, Instructional Facilitator, Sweetwater County School District #2

Kay Fabricus, District Instructional Facilitator, Fremont County School District #25 Kristie Garriffa, Principal, Sheridan County School District #2

Jennifer Hayward, Title I Teacher, Pinedale Elementary School, Sublette County School District #1 Eric Jackson, Assistant Director of Instruction, Laramie County School District #1

Dr. Julie Jarvis, Director of Curriculum, Instruction & Assessment, Fremont County School District #38

Emily Larsen, Principal/District Curriculum Coordinator, Converse #2 School, Converse County School District #2

Crystal Lenhart, Reading Specialist, Big Horn Elementary School, Sheridan County School District #1 Stacie McFadden, Extended Resource Teacher, Baldwin Creek Elementary School, Fremont County School District #1

Sara McGinnis, Curriculum Director, Sheridan County School District #1

Leanna Morton, Instructional Facilitator, Sunset Elementary School, Park County School District #6 Tracy Pare, Assistant Principal, Guernsey-Sunrise Schools, Platte County School District #2

Erin Pzinski, K-12 Literacy Facilitator, Weston County School District #1

Jody Rakness, Curriculum and Assessment Director, Washakie County School District #1

Tiffany Rehbein, English Language Arts Curriculum Coordinator, Laramie County School District #1 Andi Vineyard, Instructional Facilitator, Lincoln County School District #1

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Introduction

Early identification and instruction aimed at addressing potential reading difficulties is the key to preventing prolonged difficulties in learning to read and ensuring that all students are reading with proficiency by the end of third grade. Tier 1 core reading curricula needs to be: (a) evidence based, (b) systematic and structured, (c) encompass explicit word reading skills and rich language and knowledge development. Tier 2 supports and interventions and Tier 3 intensive interventions need to be: (a) evidence- based, (b) targeted towards the unique needs of individual students and instructional contexts, (c) based on assessment. Universal Screening of students for signs of dyslexia and other reading difficulties beginning in kindergarten is one of the first steps in this prevention process. This document will examine these topics and more.

The use of evidence-based practices and materials in all tiers of instruction is key to the development of skilled readers. Systematic instruction that is coherent across instructional contexts and guided by a clear scope and sequence is essential. The use of reliable and valid screening, as well as diagnostic, progress monitoring, and assessment tools ensures that further assessments, intervention, and instruction are guided by data. The use of a range of explicit evidence-based instructional approaches ensure that all students receive the instruction they need. Educator training in the complexities of reading development and difficulties empowers educators to teach, assess, and progress monitor the development of foundational reading skills, understand student data, and use data to guide instruction.

This document has been reviewed and updated by a collaborative of technical content experts, including Wyoming Department of Education (WDE) staff and Wyoming educators. A final review has been completed by the WDE Practitioner Review Committee comprised of Wyoming educators. The updated 2021 K–3 Literacy Guidance Framework: Instruction, Assessment, and Intervention policy document provides information and resources related to early literacy practices (K–3). Updates have been made in 2024 to reflect changes in W.S § 21-3-401 and subsequent Chapter 56 K-3 Reading Assessment and Intervention Rules to align language, terminology and processes. Assessment, instruction, intervention, and reporting requirements directly relevant to this document and K–3 literacy can also be found in W.S. § 21-3-401 Reading Assessment and Interventions, Chapter 56 Rules and related guidance documents. For more information, see the WDE Literacy, K-3 Assessment and Intervention webpage.

Section I: Literacy Instruction

"The myth (perpetuated as fact) that people learn to read naturally just by being immersed in print results in misguided instructional practices." — Moats & Tolman, 2009

Research indicates that every student should be taught how to read using evidence-based instructional practices. The earlier a student begins the reading process, the better the reading outcomes (Moats & Tolman, 2009). For the last few decades, researchers in psychology, linguistics, neurology, speech pathology, literacy education, and special education have been developing and fine-tuning our understanding of how children learn to read and why some children experience challenges when learning to read. Their findings have been very encouraging. This section outlines the essential instructional practices in a comprehensive reading approach that should be occurring on a daily basis in classrooms and intervention settings.

The National Reading Panel (2000) identified five major areas in reading that need to be taught for reading success, which serve as a starting point to developing skilled readers. These areas are referred to as the "Essential Five" in literacy:

1 Phonemic awareness
2. Phonics
3. Reading fluency
4. Vocabulary
5. Comprehension

The five essential components of effective reading instruction represent ingredients that must be present in order for children to learn to read. Effective teachers know how to blend these ingredients in the right proportions to meet the unique needs of each child. They understand the roles of phonemic awareness and phonics in building word-recognition skills and they know how to identify and correct students' weaknesses in these areas. They also know that these two foundational components will receive less emphasis as students gain competence as readers. Effective teachers know how fluency facilitates comprehension and they know how to use evidence-based strategies for helping students become fluent readers. These teachers are continually building each student's vocabulary and the ability to learn the meanings of new words through a variety of word-learning strategies. They know that recent research identifies the importance of background knowledge in informing comprehension of text more so than the practice of comprehension skills in isolation (Peng et all, 2023). Finally, they know that comprehension is the ultimate goal of reading instruction, and they are adept at helping students learn to apply evidence-based cognitive strategies as they read (Learning Point Associates, p. 39).

The Wyoming practitioner review committee added oral language and writing to the essential five as core elements for reading success.

Table 1 details instructional suggestions for the five major reading areas, oral language, and writing that need to be taught for reading success and provides a sample outline of what students need to learn (Michigan Association of Intermediate School Administrators, 2016).

Table 1
The Five Components of Reading, Oral Language, & Writing

Oral Language Oral language is the system through which we use spoken words to communicate novel ideas, share knowledge, and express feelings. Oral language is either receptive or expressive.	
Why It Is Important	
Students' ability to learn how to read and write is impacted by their ability to understand and effectively use oral language (Moats & Tolman, 2009). Difficulties with oral language can cause students to have reading obstacles. Strategically and intentionally teaching oral language skills can have positive outcomes on a student's ability to read and write.	
What Students Need to Learn	Instructional Suggestions
▪ An awareness of sounds, such as syllables and rhymes (phonological skills) ▪ Word order and grammar rules (syntax) ▪ The meaning of word forms and parts (morphological skills) ▪ The social rules of communication (pragmatics) ▪ The meaning of words and phrases (semantics/ vocabulary) ▪ Communicate orally and in writing (discourse)	▪ Engage students in conversations that support the use and comprehension of inferential language. ▪ Explicitly engage students in developing and using narrative language skills. ▪ Teach and prompt the use of academic language structures and vocabulary. ▪ Explicitly teach students how to have collaborative conversations. ▪ Use Readers' Theatre as a strategy to practice reading fluency skills and listening skills. ▪ Read aloud and discuss books (above their independent reading level) with students. Incorporate collaborative conversations to include peer-to-peer discussions. ▪ Provide students with opportunities to present to peers. ▪ Incorporate reciprocal teaching into comprehension instruction. Students read portions of a text and then take turns predicting, questioning, clarifying, and summarizing. ▪ Intentionally plan strong discussion prompts that call for students to orally communicate ideas with supporting evidence.

Phonological/Phonemic Awareness

Phonological awareness involves the auditory and oral manipulation of sounds and the awareness of the more significant parts of spoken language, such as words, syllables, and onsets and rimes. Phonological awareness tasks include detecting rhyme, clapping syllables, and counting words in sentences. Phonemic awareness, a component of phonological awareness, pertains to phonemes (sounds) in words. Phonemic awareness tasks include blending/segmenting, and onset and rime.

Why It Is Important

Phonological awareness helps students understand how to detect, break apart, blend, and manipulate sounds in spoken language. This is a precursor for understanding the association between letters and sounds. For students to successfully decode words during reading and writing, they must first understand that words are made up of speech sounds (phonemes). For example, if a student cannot orally blend a word, then sounding out a written word while reading (decoding) may be difficult. Likewise, if a student cannot orally segment a word sound by sound, then spelling a word while writing (encoding) will be difficult. The most critical phonemic awareness skills are blending and segmenting since they predict early reading and writing growth (Honig et al., 2013). The National Reading Panel (2000) found phonemic awareness instruction may be the most effective when children are taught to manipulate phonemes with letters, instruction is explicitly focused on one or two types of manipulations, and when taught in small groups.

What Students Need to Learn	Instructional Suggestions
▪ That words are made up of individual sounds that are combined to form a spoken word ▪ How to recognize the individual sound in a word (phoneme isolation) ▪ How to recognize the same sounds in different words (phoneme identity) ▪ How to recognize the word in a set of three or four words that has the "odd" sound (phoneme categorization) ▪ How to break a word into its separate sounds (phoneme segmentation) ▪ How to make a new word by adding a phoneme to an existing word (phoneme addition) ▪ How to recognize the word that remains when a phoneme is removed from another word (phoneme deletion) ▪ How to substitute one phoneme for another to make a new word (phoneme substitution)	▪ Systematically and explicitly teach phonological awareness at each of the four developmental levels: word, syllable, onset-rime, and phoneme. ▪ Give students plenty of opportunities to both blend and segment phonemes of words. ▪ Use concrete markers such as cubes, chips, buttons, and blocks to make sounds less abstract and more concrete to students (do not use actual letters/graphemes). ▪ Provide phonological awareness tasks to include detecting rhyme, clapping syllables, counting words in a sentence, blending/segmenting onset and rime. ▪ Target no more than one or two skills at a given time during a lesson; each lesson should support instruction in phoneme blending and segmentation. *(continued on next page)*

Phonological/Phonemic Awareness *(continued)*	
What Students Need to Learn	Instructional Suggestions
	▪ Provide explicit and systematic instruction and opportunities to manipulate sounds in words through - activities that involve blending sounds in words. - activities that involve segmenting sounds in words. - activities that involve adding, deleting, and substituting sounds in words. - sorting pictures, objects, and words by a sound or sounds. - modeling how phonemes are mapped onto graphemes by manipulating letters when blending and segmenting sounds.

Phonics Phonics is the knowledge of the relationship between graphemes (i.e., letters or letter combinations) and spoken sounds (i.e., phonemes) and how to use these relationships to read and spell words.	
Why It Is Important	
Phonics instruction helps beginning readers understand how to make meaning of written language using the relationship between letters and sounds. It teaches students to apply these relationships to read and write. Students who receive systematic and explicit phonics instruction are better readers than those who do not (Honig et al., 2013). The National Reading Panel (2000) found that systematic and explicit phonics instruction. ▪ significantly improves students' reading and spelling. ▪ significantly improves students' ability to comprehend what they read. ▪ is beneficial for all students regardless of their socioeconomic status. ▪ is effective in helping to prevent reading difficulties among students who are at risk. ▪ benefits students who are having trouble learning to read. ▪ is most effective when instruction begins in kindergarten or first grade.	
What Students Need to Learn	Instructional Suggestions
▪ The names of letters, the sound(s) associated with the letters, and how letters are formed ▪ The alphabetic principle (an understanding that the sequence of sounds in a spoken word are represented by letters or groups of letters in a written word) ▪ How to take their phonemic awareness skills and map the spoken sounds in words to the appropriate grapheme representation of that sound	▪ Provide explicit, systematic phonics instruction that teaches letter-sound relations and how language works. Move from simple to complex sound-spellings. Teach single consonants before consonant blends and digraphs. Teach short (lax) vowels before long (tense) vowels, variant vowels, and diphthongs. Following is an example of a general guideline for an instructional sequence:

Phonics *(continued)*	
What Students Need to Learn	Instructional Suggestions
▪ That most words in English are phonetically regular while others follow irregular patterns ▪ How phonics knowledge is applied when decoding and spelling words (i.e., encoding)	▪ Provide explicit, systematic phonics instruction that teaches letter-sound relations and how language works. Move from simple to complex sound-spellings. Teach single consonants before consonant blends and digraphs. Teach short (lax) vowels before long (tense) vowels, variant vowels, and diphthongs. Following is an example of a general guideline for an instructional sequence: - Teach short (lax)-vowel sounds (in Vowel Consonant (VC) and Consonant Vowel Consonant (CVC) combination words) before long (tense)-vowel sounds (in Consonant Vowel Vowel Consonant (CVVC) words). - Teach consonants and short (lax) vowels in combination (for example, continuous consonants should be taught: e, f, l, m, n, r, and s) - Teach high utility letters such as m, s, and t before lower-utility letters such as x or z. - Allow time between teaching visually and auditorily confusing letters and sound (e.g., e/l, b/d) in the instructional sequence. Do not teach the alphabet in sequential order. - Introduce each concept in a logical sequence and introduce the language elements from simple to the complex, and from frequent to less frequent. - Explicitly instruct students on the major sound/spelling relationships of consonants and vowels. - Utilize blending routines that include sound-by-sound blending, continuous blending, and whole word blending. - Provide extensive opportunities to apply phonics knowledge when reading decodable text and other connected texts, and when writing. - Provide opportunities for students to practice reading and rereading decodable texts to build automaticity.

Phonics *(continued)*	
What Students Need to Learn	Instructional Suggestions
	- Use word work activities such as sorting, the use of Elkonin sound boxes with letters, word building, and dictation. - Monitor students' progress and reinforce their application of letter-sound relationships through coaching during reading and writing tasks.

Reading Fluency Reading fluency is the ability to read text accurately, with sufficient speed, prosody, and expression.	
Why It Is Important	
Reading fluency is a defining characteristic of a good reader. There is a strong correlation between reading fluency and reading comprehension (Johns, 1993). Fluency enables readers to focus their mental energy on learning instead of decoding. The National Reading Panel (2000) found that repeated oral reading with feedback and guidance leads to meaningful improvements.	
What Students Need to Learn	Instructional Suggestions
▪ How to read words accurately and quickly (i.e., develop a sight word vocabulary), keeping in mind that students must first become accurate before increasing rate. ▪ How to read with a sufficient rate to promote understanding, and how to vary their reading rate based on their purpose (i.e., not too slow/not too fast) ▪ How intonation elements (e.g., tone) and expression influence comprehension and vice versa. ▪ How accuracy (90% for expository and 95% for narrative) also influences comprehension.	▪ Provide opportunities for oral and silent repeated readings that include support and feedback, utilizing both grade-level and independent-level texts. ▪ Provide extensive opportunities to read a wide range of text types (e.g., narrative, informational, poetry) through scaffolded silent reading. ▪ Utilize assistive reading strategies (i.e., choral reading, partner reading, audiobooks). ▪ Select high quality read aloud texts to model fluency, introduce advanced vocabulary, and expose students to varying sentence structure. ▪ Model fluent oral reading using teacher read-alouds and as part of repeated reading interventions. ▪ Provide direct instruction and feedback to teach decoding of unknown words, correct expression and phrasing, the return-sweep eye movement, and strategies that fluent readers use.

Vocabulary Vocabulary is the knowledge of words, their definitions, and context.	
Why It Is Important	
There is a strong correlation between vocabulary and comprehension (Honig et al., 2013). Comprehension is contingent upon understanding the words in a text; thus, lack of word knowledge can impede students' reading growth. Additionally, writing proficiency requires word knowledge. Many students come to school with limited vocabularies. Explicit instruction of vocabulary is essential for all students, especially English learners (Appendix B) and students from disadvantaged backgrounds (Chung, 2012). It empowers students to communicate verbally and in writing, and to comprehend a wide range of texts. In addition, the National Reading Panel (2000) found that age and ability level should be taken into consideration when planning vocabulary instruction and there are positive effects of repeated multiple exposure, rich contexts, pre-instruction, restructuring (varying) the tasks, and active engagement.	
What Students Need to Learn	Instructional Suggestions
▪ The meanings for most of the words in a text so they can understand what they read ▪ How to apply a variety of strategies to learn word meanings (e.g., context, morphology) ▪ How to make connections between words and concepts to build associative networks of words ▪ How to accurately use words in oral and written language ▪ That not all words are created equal. Words can be classified in tiers based on their utility (Beck et al., 2002): - Tier 1 words, such as mom, table, or book, are commonly used in speech, and little time needs to be spent on them. - Tier 2 words found across content areas and in many sources, especially in writing and academic settings. These words are applicable across content and are more specific, descriptive, and academic than Tier 1 words. Examples include compare, enormous, and vital. A lack of knowledge of these words can hinder comprehension of academic text. - Tier 3 words are content-specific domain words that relate to science, history, social studies, or math. Domain words that do not appear in many sources and can be taught at the point of use.	▪ Provide explicit instruction in the meanings of high-utility (i.e., very frequent and essential) words using student-friendly definitions. ▪ Provide explicit instruction and active engagement in word learning strategies. ▪ Provide multiple exposures to the words in rich contexts. ▪ Actively involve students in making connections between concepts and new vocabulary in both oral and written language. ▪ Provide repeated opportunities to review and use high-frequency academic (tier II) words over time, focusing on words that are contextualized in literature, essential to the text, and useful to know in many situations. ▪ Develop students' words consciousness through word play, jokes, and other game-like activities. ▪ Provide many opportunities for students to read in and out of school. ▪ Encourage talk among children, particularly during content area learning and discussions of texts. ▪ Flood/immerse the classroom with multiple opportunities to hear and use rich, oral language and focal vocabulary words as well as word walls.

Comprehension

Comprehension is the meaning made through understanding what is expressed outright and implied in texts, as well as interpreting the text based on one's knowledge and experience. Reading comprehension is an active and integrative process whereby the reader continually constructs mental representations of the text in order to understand what is read. As well as a process, reading comprehension is an outcome of both accurate, automatic word reading and language comprehension skills such as vocabulary, background knowledge, language structures, verbal reasoning, and literacy knowledge.

Why It Is Important

Deep and meaningful comprehension of written text is the ultimate goal of reading. Comprehension increases with content and knowledge, expands vocabulary, encourages the development of areas of expertise, prepares students for texts they will frequently read as adults, and promotes critical thinking skills. The National Reading Panel (2000) found seven cognitive strategies that improve comprehension: comprehension monitoring, cooperative learning, graphic and semantic organizers including story maps, question answering, question generation, and summarization. In addition, the Reading for Understanding Initiative synthesis (2020) provides three key insights: 1) the importance of emphasizing comprehension in pursuit of knowledge and insight, 2) redoubling our efforts to enhance language development, both oral and written, and 3) changing the culture of classrooms to emphasize collaboration, deep comprehension, critique, and application of comprehension.

What Students Need to Learn	Instructional Suggestions
▪ How a text's structure supports comprehension of narrative and informational texts ▪ How to apply a variety of reading cognitive strategies to gain explicit and implicit information ▪ How to collaborate with others in ways that enhance understanding ▪ The purpose and benefits of reading different text types (e.g., narrative, information, poetry) ▪ How to be aware of one's own level of understanding when reading a text (monitoring) and how to make appropriate adjustments when understanding complex text. ▪ How to transfer the language skill of inference to reading ▪ How to answer questions about what is read to them or what they have read ▪ How to ask questions to clarify one's own understanding of text ▪ Use mental imagery to improve memory for text.	▪ Teach students how to use reading comprehension strategies (deliberate mental efforts or routines by a reader to better understand a text) vs skills (such as identifying the main idea, predicting, etc). Strategies with strong evidence (IES Practice Guide, 2010) include activating prior knowledge, questioning, visualization, monitoring, inference, and retelling. ▪ Practice skills in the context of content and knowledge building with automaticity and integration of skills and strategies as a priority. Examples include predicting, using background knowledge to make connections identifying text organizational structure and summarizing. ▪ Guide students through high-quality discussion on the meaning of text to strengthen language comprehension. ▪ Select texts purposefully to support comprehension development (e.g., multiple genres, thematically linked text sets, high-quality texts with richness of ideas and information). ▪ Create an engaging and motivating curiosity through conversation/discourse to develop and build comprehension. ▪ Scaffold instruction as students learn how and when to apply appropriate cognitive strategies. ▪ Model for and teach students to closely read and annotate a variety of texts using graphic/ semantic organizers and explicit instruction. ▪ Introduce and incorporate into instruction a wide range of texts to build vocabulary and background knowledge.

Writing Writing is a cognitive task that encompasses writing mechanics, spelling, word morphology, syntax, vocabulary, and background knowledge of the content.	
Why It Is Important	
Reading and writing are reciprocal processes that strengthen comprehension and allow children to access higher order thinking skills. Writing is important for five primary reasons: 1. It is a versatile tool that accomplishes many goals for individuals such as sharing information, telling stories, and chronicling experiences. 2. Writing can be used as a powerful influencing tool when used in forms such as persuasive or opinion pieces. 3. Learning and communicating are critical purposes of writing. 4. Writing about concepts helps students better understand the material. 5. Explicit writing instruction improves students' reading skills (Graham et al., 2013).	
What Students Need to Learn	Instructional Suggestions
▪ That writing is an important extension of speaking and is a means to share memories or knowledge ▪ How to apply the mechanics to writing, spelling strategies, and word choice ▪ How handwriting aids in supporting clearly communicated ideas ▪ Understand each step in the writing process (brainstorming, planning, drafting, revising, editing, proofreading, publishing) ▪ That there are different ways to organize writing ▪ That there are different forms of writing (informational, narrative, opinion writing) using varied text structure to convey meaning ▪ How to use a combination of drawing, dictating, or writing to compose an opinion, sequence of events, and/or personal experience ▪ How to construct complex sentences.	▪ Engage students in daily time to write for a variety of purposes and in a variety of genres. ▪ Explicitly teach strategies for researching, planning, drafting, revising, and editing writing. ▪ Explicitly teach sentence construction and sentence combining skills. ▪ Explicitly teach letter formation, word construction, spelling strategies, capitalization, punctuation, and keyboarding. ▪ Examine models of good writing when engaged in writing particular genres (e.g., opinion, narrative, informational). ▪ Engage in interactive writing experiences (K–1). ▪ Explicitly teach students planning strategies for writing based upon the learning task (Graham et al., 2011). ▪ Incorporate peer review strategies. ▪ Embed handwriting instruction across the curriculum. Handwriting instruction should not replace the time allocated to writing instruction. ▪ Teach reading and writing in conjunction, not as standalone skills. ▪ Provide daily opportunities to write texts in which students listen for sounds in words and approximate spellings.

Supplemental Resources

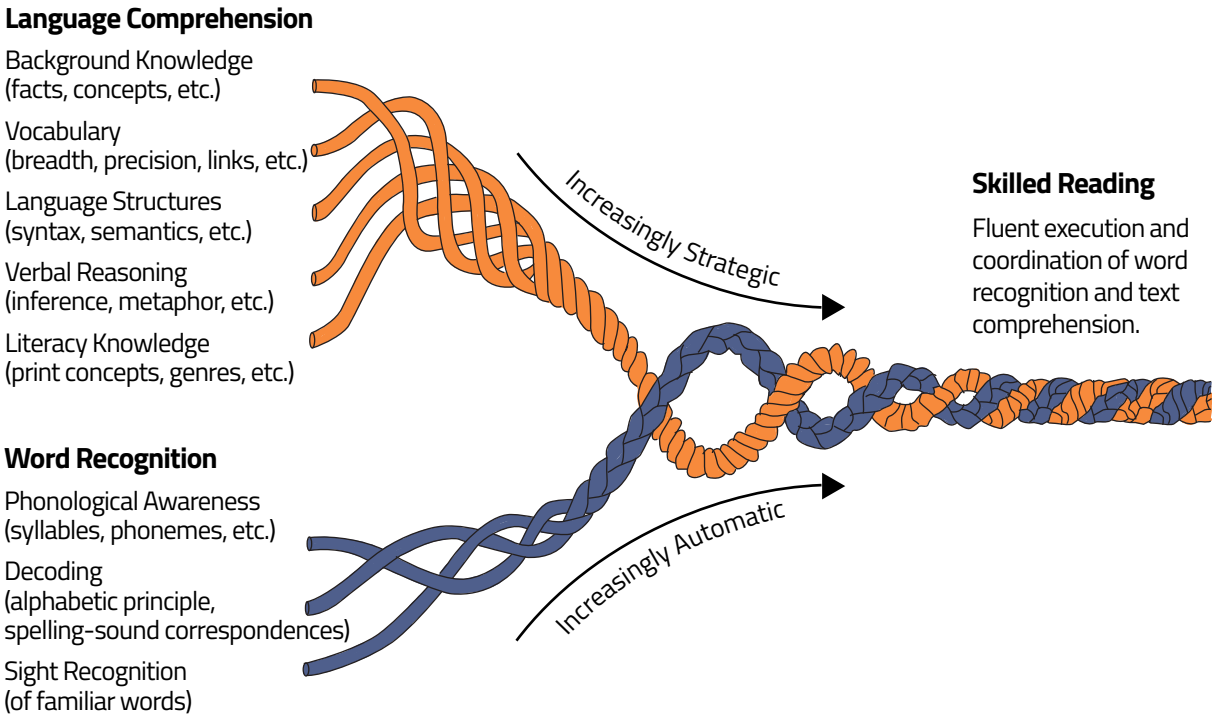
The resources that follow are complementary to and expand on the information presented in Table 1, specifically for understanding what informs reading success.

The Scarborough Rope Model of Skilled Reading

The Scarborough Rope model, originally developed by Dr. Hollis Scarborough in 2001 (Figure 1), provides a visual representation of the intertwining skills (strands) that must function together for strategic skilled reading (the rope) to occur. Strands are represented in two main skill areas: language comprehension and word recognition (Scarborough, 2001). Within each are individual skills, e.g., background knowledge of language comprehension and phonological awareness of word recognition. When one strand is not functional, the rope is weakened, and thus skilled reading is not functional or optimal; the successful use of each skill depends on the others. With increasing strategic and fluid use of each strand, the rope strengthens, and skilled reading occurs.

Figure 1

The Scarborough Rope



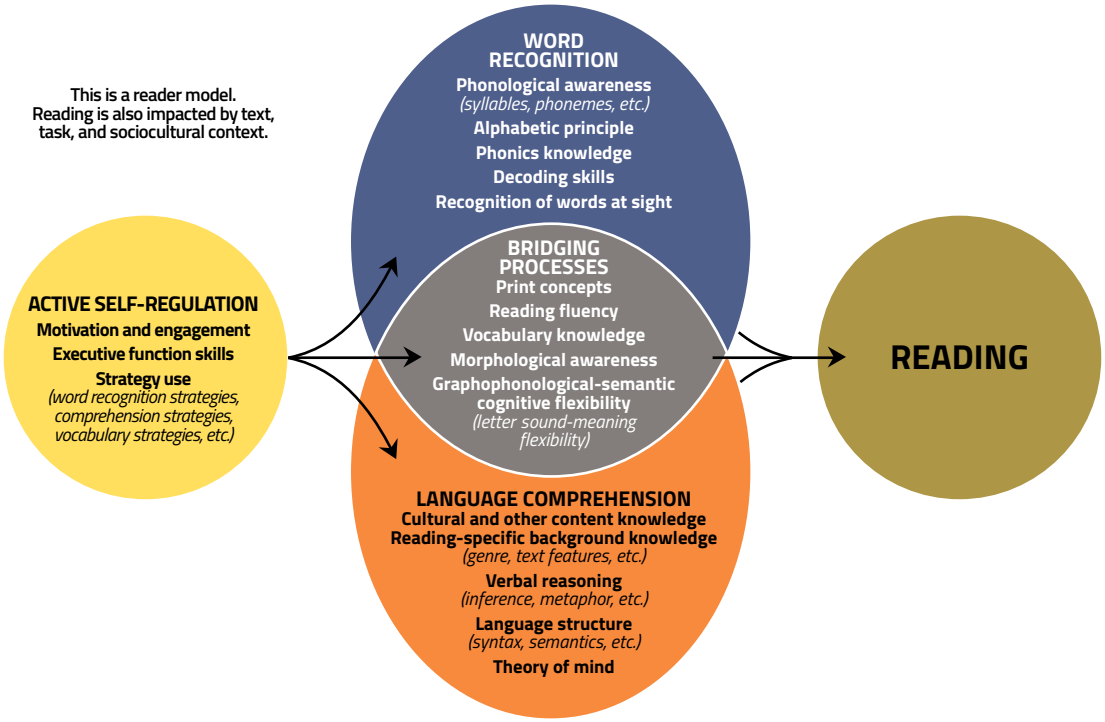
Source: Scarborough, 2001

The Active View of Reading : Communicating Advances Beyond the Simple View of Reading

The Active View of Reading developed by Nell Duke and Kelly Cartwright in 2021 reflects three major advances in research beyond word recognition and language comprehension (as illustrated by Scarborough's Rope figure). These advances in research are in the domains of executive functioning skills (flexibility in thinking, inhibitory control, working memory, planning, and attentional control) motivation/engagement, and strategy use (decoding strategies, questioning oneself as reading, visualizing, inferential processes to create a mental model, vocabulary development strategies, etc.). A growing body of research demonstrates that self-regulating skills play a central role in successful reading. Research has also found there is significant evidence in bridging or overlap processes between word recognition and language comprehension which include print concepts, fluency, vocabulary knowledge, morphology awareness, and graphophonological-semantic (letter-sound-meaning) cognitive flexibility (as shown by the Four-Part Processing Model figure). In summary, The Active View of Reading illustrates the relationship between executive function, motivation/engagement, strategy use with word recognition development bridged together with language comprehension to produce skilled reading. Nell Duke and Kelly Cartwright also acknowledge the text, task and sociocultural context influences reading. This is referenced later in this document.

Figure 2

The Active View of Reading: Science of Reading Processes



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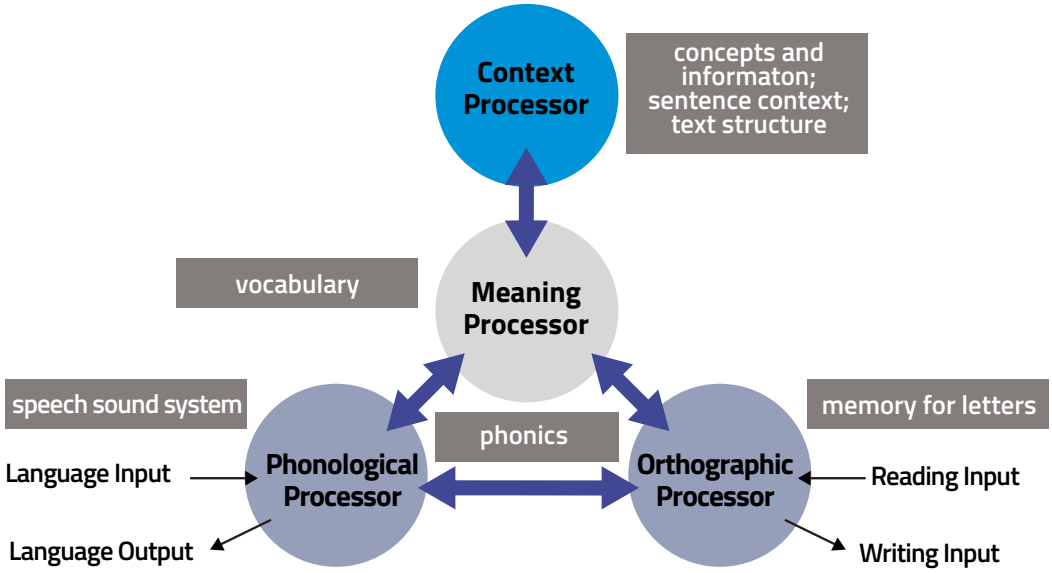
The Four-Part Processing Model of Word Recognition

The Four-Part Processing System originally developed by Mark Seidenberg and James McClelland in 1989, and adapted by practitioners and researchers over the years (Figure 3), provides a visual representation of the processes involved in decoding unfamiliar words: the Phonological Processor, the Orthographic Processor, the Meaning Processor, and the Context Processor (Stowe, 2016). The processors reflect actions that must occur sequentially for the brain to decode and make meaning of words in text. First, the Phonological and Orthographic Processors function together to decode a word. When decoded, the Vocabulary Processor makes meaning of the word. The meaning is then considered by the Context Processor that applies the meaning appropriately in the given situation or environment the word is presented in.

Figure 3

Four-Part Processing Model of Word Recognition



Section II: Indicators of Reading Difficulties

Indicators

Researchers across many fields have concluded that children fall into different profiles of reading difficulties (Valencia & Buly, 2004), and as such, they can have difficulty in any one or more of the areas needed for successful reading. It is critical that students make adequate progress. The goal is to provide appropriate word reading instruction in Kindergarten through grade 3, so that by the end of 3rd grade students are more able to meet grade level proficiency. A long-term study by the Annie E. Casey Foundation (2011) found that students who were not proficient in reading by the end of 3rd grade were four times more likely to drop out of high school than proficient readers. While students can present difficulties in individual areas of reading —such as phonemic awareness, phonics, fluency, vocabulary and background knowledge, comprehension,

executive functioning and self-regulatory abilities, or language abilities—two overarching areas are 1.) difficulties with phonological processing and word recognition, and 2.) difficulties with language and comprehension. The following sections provide guiding questions to consider when observing and screening students to inform possible further diagnostic assessment, instructional support, or intervention can be provided if needed.

The following guiding questions to address possible phonological processing and word recognition difficulties are adapted from National Academies of Sciences, Engineering, and Medicine (2018).

- **Does the student have difficulty utilizing their phonics knowledge to decode?**
  Some students have a difficult time decoding words, even if they are phonetically accurate. They might add or omit sounds. They might, for example, read steam for stream.
- **Does the student have difficulty learning and retaining words by sight?**
  Many common words, like eye and thought, have a unique etymology (origin or history)—so recognizing them is the only way to read them. Because they are common, they should be recognized quickly. Students should be taught the part of the irregularly spelled common word they can decode and analyze the exception part or heart (know by heart) part of the word to ensure secure orthographic mapping of the word (Ehri, 2014).
- **Does the student exhibit slow and laborious decoding skills?**
  Phonics and phoneme awareness curricula are now commonplace in early education. Struggling readers benefit from substantial review of previously taught concepts, more explicit phonemic awareness and phonics instruction, and increasing opportunities to apply skills in connected text (Blachman et al., 2004; Pericola Case et al., 2010; Denton et al., 2010).
- **Does the student exhibit difficulty reading text fluently?**
  Some students may be able to sound out words, but they are not able to *put it all together* on the page. Such a student's reading is choppy; their lack of fluency might interfere with reading comprehension.
- **Does the student have difficulty spelling?**
  Some students have difficulty including all of the needed phonemes (*optnrty* for *opportunity*) and some can spell phonetically but cannot retain spelling patterns (*opertunity* for *opportunity*).
- **Does the student over-rely on inefficient decoding strategies?**
  Some students compensate for decoding difficulties by using inefficient strategies such as saying the first letter and guessing, using the pictures and context to guess, and using the sentence syntax.

The following guiding questions to address possible language and comprehension difficulties are adapted from Cain et al. (2004), Duke et al. (2004), National Research Council (1998), Perfetti et al. (2005), Scanlon et al. (2016), and Scarborough (2001).

- **Does the student have difficulty reading text fluently?**
  Some students have difficulty reading books and other connected texts with automaticity and at a sufficient rate to allow them to focus their attention on comprehending what was read.
- **Does the student exhibit difficulties with short-term or working memory?**
  Many students with reading difficulties seem to have less short-term memory (i.e., working memory) capacity than "typical" peers. Students who are unable to hold multiple pieces of information in mind at one time may have less fundamental short-term capacity, or it may be indicative inefficient language functioning.
- **Does the student have difficulties with oral language?**
  Some students exhibit difficulties with oral language, whether receptive or expressive. These difficulties are most common in relation to phonemic awareness, yet comprehension is also impacted by all other aspects of language functioning: morphology, syntax, semantics, and pragmatics.

- **Does the student have limited background knowledge (i.e., vocabulary, concepts, experiences) related to the topic being read about?**
  For some students, comprehension difficulties stem from not knowing a great deal about the topic(s) in the text. As such, students are unable to connect the words being read to known experiences and ideas, and they lack an understanding of many of the unique words in the text.
- **Does the student speak a first language other than English, or speak in a dialect different than Standard English?**
  While vocabulary knowledge and background knowledge are major contributors to comprehension difficulties, different languages and dialects pose difficulties for comprehension due to differences in language structures as well (e.g., syntax, idioms and other language use, morphology).
- **Does the student have difficulties with written language?**
  Written language and oral language differ in significant ways, and these differences also depend on the genre in which a student is reading. Students less familiar with the forms and functions (e.g., word choices, text structures, sentence structures) of written language may exhibit difficulties with comprehension as a result.
- **Does the student think actively while reading?**
  Some students exhibit difficulties monitoring their reading and using particular strategic actions (e.g., connecting to background knowledge, inferring meanings, paraphrasing or summarizing). These students often lack awareness that their reading is not making sense, or if they are aware, they lack an understanding of what to do about it.
- **Does the student lack engagement while reading?**
  Some students exhibit difficulties comprehending or remembering what they were reading that stem from a lack of motivation or interest in the book or topic, or a lack of connection to their own lives and experiences.

In addition, the Wyoming Department of Education will be publishing a Dyslexia Handbook in the summer of 2024. Please see the WDE Literacy webpage for more and updated information.

Section III: Wyoming Multi-Tiered System of Support (WY-MTSS)

The information in this section has been adapted from the Wyoming MTSS Center **website**.

WY-MTSS center is a cross division effort to support local Wyoming educators in effective implementation of multi-tiered system of supports, or MTSS. MTSS is a proactive process used to improve learning outcomes for all students and develop a positive and safe program, school, and community climate. WY-MTSS is not a specific "program" or "model," but a compilation of effective practices, interventions, and systems change strategies with a long history of empirical research and support. MTSS is a framework that focuses on system-level change and continuous improvement across the classroom, school, and district to provide each student with opportunities to maximize academic achievement and develop skills for success.

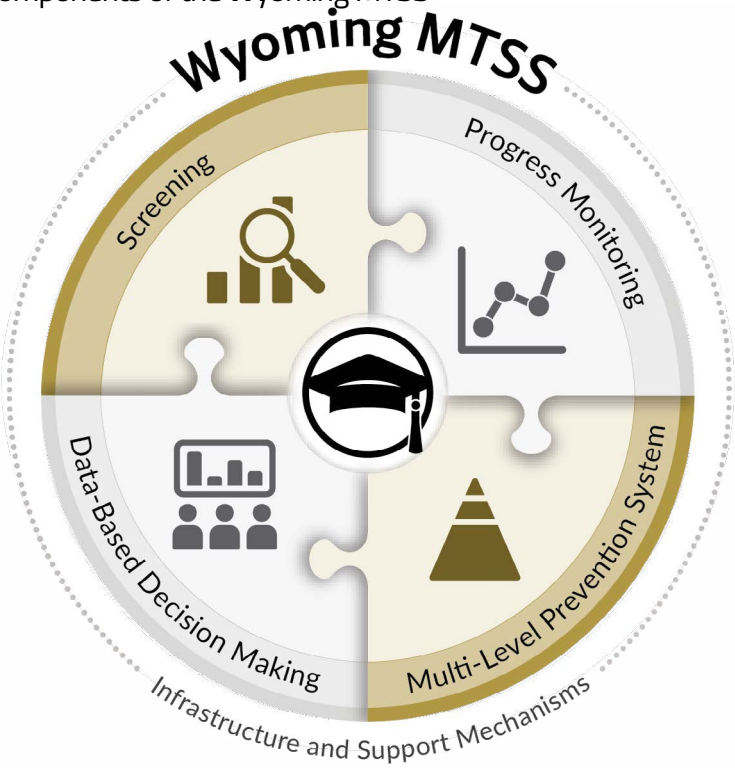
The process is represented by a 3-tier framework for prevention, intervention, and support that is implemented by core school teams. District-level coaches support school teams as they teach schoolwide procedures and expectations with consistent, positive guidance. A key element of the process is the collection and analysis of data and using a problem-solving approach to address skills deficits and challenging behavior(s).

Based upon a 3-tiered model (*Universal, Targeted, Intensive*), the WY-MTSS framework.

- utilizes a research-based system approach to teaching and improving academic skills and establishing a positive social culture with the behavioral supports needed for schools to be effective learning environments for all students
- focuses on efficient use of data to guide decisions for improving student achievement and ensuring a safe and positive learning environment
- guides schools in designing, implementing, and evaluating effective school-wide, classroom- and student-specific instructional plans around academics, behavior, and social skills
- includes a broad range of systemic and individualized strategies for achieving important learning outcomes while preventing problem behavior with all students

Figure 4

The Four Essential Components of the Wyoming MTSS



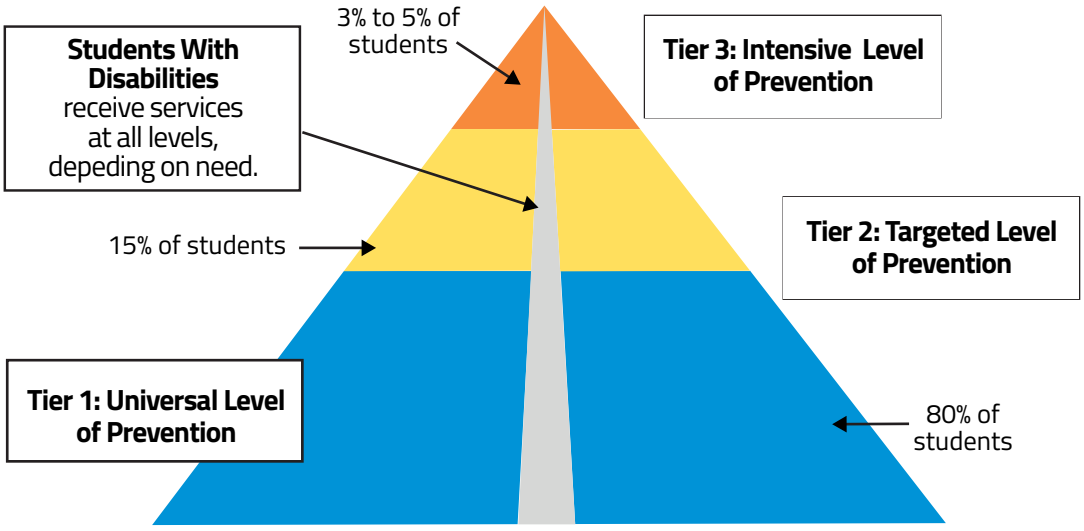
The four essential components of the MTSS are

- Universal Screening: a system for identifying students at risk for poor learning outcomes
- Progress monitoring: using reliable and valid measures to assess a student's performance and monitor the effectiveness of the supports provided to the students.
- Schoolwide, multilevel prevention system: at least three increasingly intense levels of instructional support.
  - Tier 1: high quality, school wide, primary level and curriculum to deliver state standards.
  - Tier 2: instruction that is supplemental to the primary level that provides supports targeted to students' needs, often in small groups using validated interventions.
  - Tier 3: instruction that is also supplemental to core, but more intense than secondary, often individualized.

- Data-based decision making for
  - Instruction: determining who needs assistance, what type of instruction or assistance is needed, whether the duration and intensity are sufficient, and so on.
  - Evaluating effectiveness: Make decisions about intensification of instruction and supports, systematically evaluating the effectiveness of the core curriculum and implementation of guaranteed and viable core curriculum for all students.
  - Movement within the multilevel system: Utilizing the MTSS framework to address the needs of students at risk of failure, and to assign evidence-based interventions. Tracking interventions using data to assess the level of support needed for student success.
  - Disability identification: Deciding when to refer the student for special education evaluation based on the response to various interventions, and comparisons to his or her peers. This is, of course, in accordance with state and federal law.

The phrase "Infrastructure and Support Mechanisms" surround the circular image depicting Wyoming MTSS. The elements of these mechanisms include prevention focus, leadership personnel, school-based professional development, cultural and linguistic responsiveness, resources, schedules, communications with and involvement of families, and communication with and involvement of staff. The WY MTSS Implementation Guide and the WY MTSS website can provide resources for implementing MTSS processes to support literacy development of students.

Figure 5
MTSS Levels of Prevention



The Wyoming Department of Education supports the Multilevel Prevention System triangle (Figure 5). It is intended to represent the three levels of prevention and the percentage of students who would be expected to benefit from these levels of prevention in an effective system.

- The first level, Tier 1, is indicated in green. It is expected that most students, at least 80%, benefit from core curriculum delivered through differentiated instruction.
- The next level, Tier 2, is supplemental to Tier 1. Even with good instruction, it is estimated that approximately 15% of students will need supplemental, targeted, small group instruction to benefit from the core instruction and curriculum.
- The top level, intensive instruction or Tier 3, includes specialized, individualized systems for students with intensive needs. It typically involves small group instruction of one to three students who are significantly behind their peers. It is estimated that approximately 3 to 5% of students will need this level of support.

If fewer than 80% of students are benefiting from the current core instruction (Tier 1) prevention system, schools should consider focusing school improvement efforts on improving the core instruction and curriculum. If there is a large percentage of students in Tiers 2 or 3, consider implementing large group instructional activities and system changes within Tier 1 to reduce the number of students requiring additional support.

Students with disabilities may receive supports throughout levels of the system, depending on their individual needs. If there is a disproportionate number of students being referred for Special Education, schools need to consider the effectiveness of Tier 2 interventions.

Table 2
Intervention Levels and Tiers

	Tier I	Tier II	Tier III
Instruction or Intervention Approach	Comprehensive, research-based practice and resources	Standardized, targeted small-group instruction	Individualized, based on student data
Group Size	Class-wide (with flexible instructional grouping)	3 – 7 students	No more than three students
Assessment	Screening, three times yearly	At least bi-weekly or monthly	Weekly
Population Served	All students	Students identified as at risk (~15% – 20%)	Significant and persistent learning needs, non-responders (3% – 5%)

Districts design and deploy MTSS multilevel prevention systems to address the unique context and needs of the students they serve. Table 2 shows an example of how districts might set up their intervention levels and tiers. The intervention levels and tiers will need to be periodically adjusted based on the intensity and nature of those interventions and how students respond. Student responsiveness data and information must be collected to determine the needed adjustments.

Section IV: Selecting Evidence-Based Resources

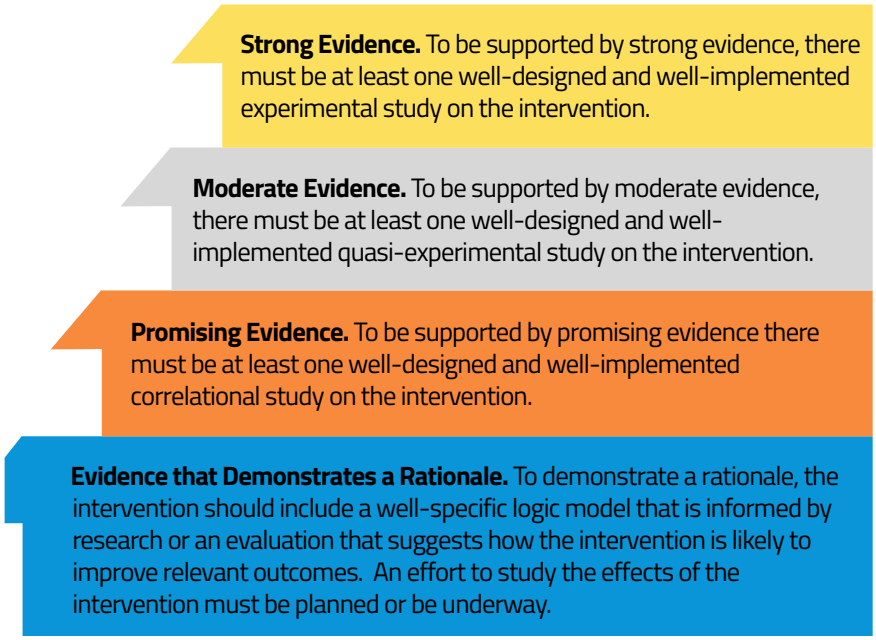
The purpose of this section is to provide educators and administrators with guidelines for making school- and district-level decisions about resources. Rather than attempting to create an exhaustive list and potentially excluding information, the tools in this section provide criteria for evaluating literacy resources using the specific lens of "evidence-based."

There are two main types of evidence-based research about early reading to be considered when making decisions about whether a practice or program is considered evidence-based: quantitative and qualitative. Criteria for rating the quality of quantitative research are well developed and have been used extensively in examining interventions designed to improve reading performance of younger students. Equally important but not as well documented are the criteria for rating the quality of qualitative research (see Appendix A for further details and information about the criteria for determining high-quality qualitative and quantitative scholarship).

ESSA Guidelines provide four Tiers of Evidence (Figure 6; National Center on Improving Literacy, 2018). These four tiers are an important starting point in determining whether a practice is considered evidence-based.

However, knowing that educational contexts are complex, a sole focus on replicating a practice described in a quantitative research study does not account for the unique and dynamic needs and features that make up varied schooling settings. Contextual factors (those that are systematically described through qualitative research methods) related to the school, students, educators, and community, matter greatly in the successful implementation of instruction and assessment practices.

Figure 6
What Do We Mean By Evidence- Based?



These criteria were established in section 8101(21)A of the elementary and Secondary Education Act.
The research reported here is funded by awards to the National Center on Improving Literacy from the Office of Elementary and Secondary Education, in partnership with the Office of Special Education Programs (Award#:S253D160003). The opinions expressed are those of the authors and do not represent views of OESE, OSEP, or the U.S. Department of Education.

Contextual Factors That Influence Literacy Learning

According to an influential 2018 federal report,

> Learn is an active verb; it is something people do, not something that happens to them. People are not passive recipients of learning, even if they are not always aware that the learning process is happening. Instead, through acting in the world, people encounter situations, problems, and ideas. By engaging with these situations, problems, and ideas, they have social, emotional, cognitive, and physical experiences, and they adapt. These experiences and adaptations shape a person's abilities, skills, and inclinations going forward thereby influencing and organizing that individual's thoughts and actions into the future (National Academies of Sciences, Engineering, and Medicine, 2018).

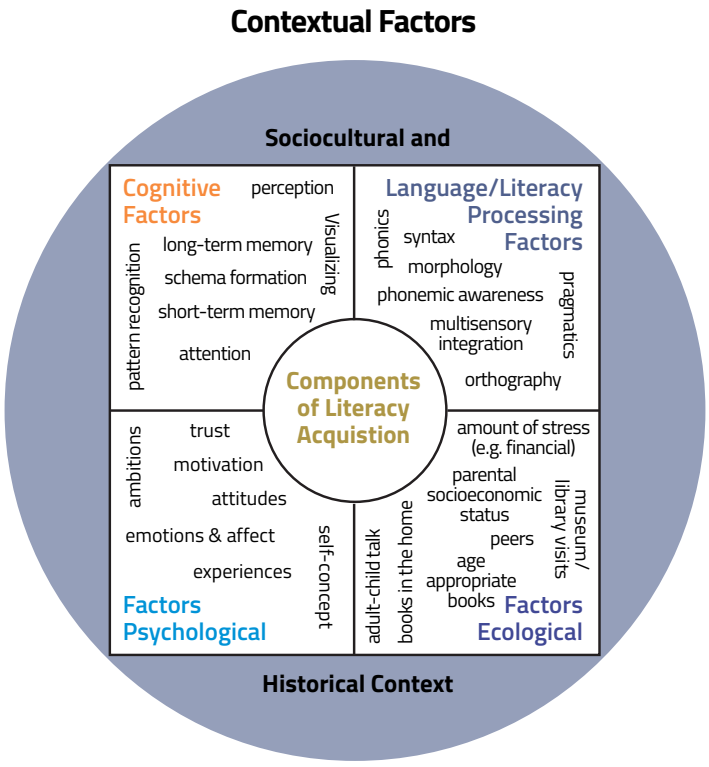
The above quote emphasizes four central ideas about learning:

- Learning is an active process; learners actively make sense of the world in which they live and function.
- Histories of learners, contexts, and subjects inform learning experiences.
- Future orientations shape and inform learning in present contexts.
- Social, emotional, cognitive, psychological, and physical aspects are important to learning.

Figure 7 (Chiu et al., 2012) provides a visual of five sets of contextual factors that should be considered when striving to promote students' literacy learning: (a) the sociocultural/historical contexts of learning, (b) language and literacy processing factors, (c) cognitive factors, (d) psychological factors, and (e) ecological factors. The idea is that the information in the square (i.e., cognitive factors, language/literacy processing factors, psychological factors, and ecological factors) are all contextualized in people's social, historical, and cultural contexts.

Figure 7

Contextual Factors to Promote Literacy Learning in Students



Sociocultural/Historical Contexts of Learning

The sociocultural/historical context for learning is the overarching context in which the other four factors are embedded.

According to the National Academies of Sciences, Engineering, and Medicine (2018), learning is profoundly influenced by the social and cultural contexts of individuals. Culture is the "learned behavior of a group of people that generally reflects the tradition of that people and is socially transmitted from generation to generation through social learning (p. 22). Culture is a dynamic, "living system" that is informed by practices passed down through history but is also adapted or transformed as members of cultural groups shift practices across time to meet changing needs and demands of groups. The following orienting questions can help educators address sociocultural/historical contexts of literacy learning when planning for and implementing evidence-based literacy instruction in schools and classrooms.

Sociocultural/Historical Contexts of Learning: Orienting Questions

- Am I viewing culture as a complex living system of practices by groups of people rather than viewing culture as solely, or primarily, different food, dress, and holidays?
- Am I aware of my own cultural ways of talking, interacting, thinking, acting, feeling, and believing (Gee, 2015) and the ways that my cultural norms may be different from the cultural norms of my students (cf. Philips, 1983)?
- Am I aware that different cultural groups may have different ways of talking, interacting, thinking, acting, feeling, and believing? Moreover, these different "cultural ways of being" can have a profound impact on classroom interactions and student learning (Au & Carroll, 1997).
- Am I striving to understand my students' cultural norms by learning from and with the children and families in my educational spaces?

Language and Literacy Processing Factors

There are many factors to consider related to language and literacy processing (Gee, 2015; Barton & Hamilton, 2012; Heath, 1983; Street, 1984). The language and literacy processing factors depicted in Figure 7 include—but are not limited to—the five-central research-based aspects of teaching children to read: phonemic awareness, phonics, vocabulary, fluency, and comprehension (National Reading Panel, 2000). Moreover, these five-central research-based aspects of literacy should be taught and used in the service of teaching students to engage in meaningful speaking, listening, viewing, reading, and writing. Rather than viewing literacy learning as an isolated individual practice that is the same for all children in all contexts, students (and their families and teachers) are situated within social institutions and groups that develop and use the aforementioned literacy-related practices in unique, context-embedded ways (Street, 1984).

Sometimes, the ways that children and their families engage in speaking, listening, viewing, reading, and writing are different from the ways educators in schools engage in those same literacy practices. Thus, high-quality literacy instruction should honor, and be built on, the unique cultural and linguistic backgrounds that students bring to school settings (Moll, 2015) and should include attention to the knowledge, skills, and dispositions associated with using reading, writing, speaking, listening, and viewing in school-based ways. As well, educators should realize that all children from all different cultural and linguistic contexts are "active, critical, and creative users and creators" of language and texts (International Literacy Association, 2020, p. 5), situated within communities that have their own norms and expectations for how texts should be created and used (Harré & Van Langenhove, 1998; Lave & Wenger, 1991).

Language and Literacy Processing Factors: Orienting Questions

- Am I aware of the five central research-based aspects for teaching children to read and what the research base says about best practices pertaining to each of these research-based practices?
- Am I aware that I need to understand the lived backgrounds and experiences of the children in my classroom, school, and district so that I can modify my instruction around the key literacy practices to meet the specific needs of my students?
- Am I aware that my central goal for student literacy learning should be to apprentice students into meaningful uses of reading, writing, speaking, listening, and viewing? The five central research-based aspects of teaching children to read are means to an end, not the end point of effective literacy instruction.
- If I am using a purchased program or curriculum for literacy instruction, am I constantly asking myself how I need to modify, supplement, and/or adapt the program or curriculum to meet the needs of the specific children in my classroom, school, and district?

Cognitive Factors

Cognition has to do with the process of acquiring knowledge. Cognitive factors related to learning include both environmental factors and factors internal to learners themselves. Cognitive factors related to learning include—but are not limited to—spatial representations and relations; associations among sensory perceptual processes; the content of that which is to be learned; intrinsic factors such as how we perceive objects in the space around them; how we understand and make sense of part-whole relationships; and humans as active learners.

Cognitive Factors: Orienting Questions

- Am I aware that all children have backgrounds and experiences on which to draw that can inform their school learning if the teacher seeks to understand children's backgrounds and experiences and draw on them at school?
- Am I aware that children tend to learn more deeply when content is taught and learned within a system rather than as isolated bits of information?
- Am I aware that children need to actively engage meaningfully with the world to learn and make sense of it?

Psychological Factors

Psychology pertains to the study of the human mind. Psychological factors pertaining to learning include —but are not limited to—motivation, achievement, disposition, and metacognition.

Psychological Factors: Orienting Questions

- Am I aware that I need to teach students to monitor their own thinking (i.e., metacognition)?
- Am I aware that it is best to help students foster a growth mindset (i.e., intelligence can be developed) rather than a fixed mindset (i.e., intelligence is static) with respect to learning, motivation, and achievement?

Ecological Factors

Ecological factors foreground relationships between social structures and individuals. Characteristics of individual students (e.g., race or age) are nested within systems at different levels. One level, (micro-level systems) can include peers and a teacher in a child's classroom at school. A broader level (mezzo-level systems) focus is on institutions such as schools. An even broader level (macro-level systems) view includes policy contexts that can shape and inform interactions and schooling at the other levels.

Ecological Factors: Orienting Questions

- Am I aware that individual students are nested within broader systems that can influence and inform interactions (sometime for better and sometimes not) at the micro-level?
- Can I analyze and critique the ways in which different layers of systems (district, state, nation) can influence and inform students' learning opportunities in immediate contexts?

Physical Factors

Physical factors not only have to do with the child's physical ability to accurately see graphemes and text, but also the ability to fluently track lines and paragraphs.

Physical Factors: Orienting Question

- Am I aware if the child has any accommodations, or a visual, hearing, or physical challenge? Have they been screened?

Culturally Responsive, Adaptive Teaching

Although a standardized curriculum is designed to meet the needs of many, it does not meet the needs of all. Students benefit from teachers coupling the science of reading and adaptive teaching. "Adaptive teachers fully embrace robust forms of diversity, viewing students as individuals with rich linguistic and cultural backgrounds and, where reading instruction cannot be wholly preplanned, using standardized curricula" (Vaughn et al., 2020, p. S301).

Tools for Evaluating Literacy Resources

The following tools are recommended to inform decisions made by building or district personnel.

- The WY MTSS Implementation Guide provides district personnel with an instructional framework that includes the core features of schoolwide, multi-tiered systems of support for literacy, including universal screening of all students, multiple tiers of instruction and support services, and an integrated data collection and assessment system to inform decisions at each tier of instruction. The **WY MTSS** Center has other resources to guide MTSS work.
- **The Rubric for Evaluating Reading/Language Arts Instructional Materials for K–5** provides district personnel or teachers with guidelines for selecting effective, evidence-based resources for Tier 1 instruction as well as for interventions. In addition, The **Reading League** has published a curriculum review guide.
- Appendix A contains more information on the definitions of evidence based research.
- Appendix B contains resources for English Learners.
- The Evidence-Based Resources for Literacy (Appendix C) provides a list of resources for your classroom, school, and/or district. To make the Resources Appendix quick and easy to use by teachers, administrators, and other school district personnel, it has been divided into categories which reflect the contexts listed above.

Section V: Discussion of Terms

Some definitions have been added to assist in the understanding and implementation of Chapter 56 Rules: K-3 Reading Assessment and Intervention. Those that have particular relevancy to the rules have been marked with *. (updated 1/2024)

Adaptive - an instrument that adjusts the difficulty or complexity of the items presented to the student based on the prior performance of the student.

Alphabetic Principle - the concept that letters represent speech sounds, an understanding critical for learning to read and spell.

Assessment Instrument - a tool used to evaluate, measure, and document the academic readiness, learning progress, skill acquisition, or educational needs of a student.

Assessment program* - the set of comprehensive and systematic tools used to evaluate and measure student progress and performance in the development of reading skills.

At Risk/High Risk* - the purposes of screening for early reading skills is defined as a student who is demonstrating a performance level on predictive skills which reflect a high risk level of not developing adequate reading skills in the future. For the purposes of progress monitoring, this is defined as a student who is not adequately attaining the specifically assessed skills. This target is established to be equivalent to scores below the 20th percentile. Some screening tools establish this level at the 15th percentile.

Benchmark/Low risk/Minimal Risk* - is a screening and progress monitoring target established to be equivalent to any score at or above the 40th percentile. When screening, this is the point at which most students, if performing at or above, will have a high likelihood of developing adequate reading skills. When progress monitoring, this is the point at which students, if performing at or above, are proceeding adequately in learning the skills assessed.

Comprehension* - the ability to extract, construct and apply meaning from text (WETA Public Broadcasting, n.d.a). "Comprehension is the reason for reading. If readers can read the words but do not understand what they are reading, they are really not reading. As they read, good readers are both purposeful and active" (Armbruster et al., 2010, p. 41).

Comprehensive Literacy Instruction - teachers use an explicit, purposeful, integrated approach to literacy (including evidence-based, high-quality instructional practices) that engages students in all major components of the complex literacy process. The process includes reading (and reading foundational skills), writing, speaking, listening, and language across all disciplines to comprehend and create text for effective communication with others in a variety of contexts.

Core Curriculum* - a comprehensive Tier 1 instruction curriculum that includes

- training in which all teachers of reading, including those supporting reading instruction, participate
- a clear scope and sequence
- a pacing guide
- sufficient material for initial and distributed skills practice and mastery
- embedded assessments at the skill level and general outcome level

Criterion Referenced Assessment/Indicator Referenced* - an assessment used to measure a student's performance on a set of predetermined criteria.

Curriculum* - The overall design of instruction of opportunities provided for learning. A curriculum may include materials and textbooks, planned activities, lesson plans, lessons, and the total program of formal studies or education experiences provided by a school or teacher (International Literacy Association, n.d.).

Curriculum Independent Assessment* - means the use of screeners and assessment tools that are separate from purchased curriculum and developed for the purpose of screening or progressing monitoring and are independent of curriculum a district may choose to use.

Cut Scores* - established to describe the performance of students. On an early reading screening assessment, cut scores will describe the likelihood of a student developing or not developing adequate reading skills. These levels have been validated by research and approved screening tools will adhere closely to the established research. Terms found in screening and progress monitoring tools include at or high risk, moderate or some risk, low or minimal risk as well as benchmark for this last category.

Data Literacy* - a systematic process of analyzing and interpreting data at various levels in order to discover patterns and problems, then using this data to drive decisions regarding a process.

Diagnostic Assessment* - a tool administered to an individual student in order to determine strengths and pinpoint specific areas of need in order to guide instruction or intervention.

Dyslexia* - a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge (International Dyslexia Association, 2014).

Evidence-Based* - instruction and assessment practices are those that have been tested and described through rigorously-designed, peer reviewed research studies using quantitative and qualitative approaches and have rigorously studied over tie through multiple opportunities and contexts. . Such research seeks to both compare the outcomes of the practice against other practices and describe the contextual factors requisite in using the practices effectively. Peer-reviewed research articles are good sources of evidence-based literacy practices, yet a single research study does not constitute an evidence-based practice; rather, evidence-based practices are those that have been rigorously studied over time through multiple opportunities and contexts, and for which there is a preponderance of evidence.

Explicit Instruction* - skills are explicitly taught, providing students with information about what to do, why and when to do it, and how to do it. No assumptions are made about skills or knowledge children will independently acquire. Characteristics of explicit instruction include:

- Follows a scope and sequence that is sequential and cumulative.
- Begins with the goal of the lesson and the relevance of skill.
- Provides interactive review of prior skills and knowledge.
- Provides step by step demonstration of skill. This modeling is critical.
- Uses clear and concise language.
- Provides a range of examples and non-examples.
- Includes frequent check-ins to ensure students are meeting learning targets.

- Provides supported then independent practice through and I do, we do you do approach.
- Provides initial and distributed practice sufficient for student mastery.
- Skill mastery is progress monitored and the data collected is regularly recorded and analyzed to guide instructional planning.

Some core curricula lack guidance about explicit instruction, scope and sequence, and initial and distributed practice materials/opportunities, so these must be intentionally supplemented.

Fidelity* - using an assessment, instructional technique, intervention, curriculum in the manner in which it was designed and the manner which has been demonstrated to provide the intended outcomes.

Formative Assessment* - occurs during the instruction process, allowing the teacher to determine whether students are learning the content and if there is a need for adjustment in instruction to meet the needs of students.

Foundational Reading Skills* - needed in order to be proficient and automatic in word recognition including phonological awareness, decoding, and sight recognition.

Intonation - The rise and fall of the voice in speaking (Stevenson, 2010).

Instruction* - the core curriculum, core instruction, classroom instruction done in Tier 1.

Intervention* - supplemental instruction provided to students who are not responding to evidence based, high quality instruction.

Intervention Program* - the multiple intervention opportunities provided to students based on the individual identified need.

Language Comprehension* - the comprehension of oral or written words including background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge.

Moderate Risk/Some Risk* - a screening and progress monitoring target established to be equivalent to scores between the 40th and 20th percentile. Students have a 50% chance of scoring proficient on the state outcome assessment.

Multi-Tiered - the Response to Intervention (RTI) framework is predicated upon early identification and intervention with students who show signs of possible reading difficulties. Embedded within the RTI model are multiple Tiers of instruction: Tier 1, Tier 2, and Tier 3. Tier 1 represents evidence-based comprehensive core reading instruction. Universal Screening data is first used to determine effectiveness of Tier 1 instruction, and then to group children for Tier 2 support. Tier 2 supports are targeted interventions to address specific skill deficits and are typically offered in small groups, sometimes in the General Education Classroom. Tier 3 supports are also thought of as special education. Tier 3 supports are individualized and intensive and the result of comprehensive evaluation. Decision Rules should be established that guide the movement of students among Tiers of intervention.

Nonsense Words* - made up words that follow phonetic rules and phoneme/grapheme patterns, but have no real meaning, also may be word parts.

Oral Reading Fluency - the ability to read text accurately, with sufficient speed, prosody, and expression. It is an essential component because it permits the reader to focus on constructing meaning from the text rather than on decoding words (International Literacy Association, n.d.).

Oral Language - the system through which we use spoken words to express knowledge, ideas, and feelings (Lesaux & Harris, 2015). "The more complex aspects of oral language, including syntax or grammar, complex measures of vocabulary (such as those in which children actually define or explain word meanings), and listening comprehension were clearly related to later reading comprehension" (Shanahan & Lonigan, 2017).

Outcome Assessment* - a summative assessment that is considered high-stakes, end of the year accountability tests required to be given to all students. These assessments are normed and are used for comparative purposes or demonstrate progress within a school, district, or state system reflecting the end result of curriculum design and teaching of standards over the course of one school year.

Oral Reading Fluency* - the ability to read text accurately, with sufficient speed, prosody, and expression. It is an essential component because it permits the reader to focus on constructing meaning from the text rather than on decoding words.

Phonics* - a system for approaching reading that focuses on the relationship between letters and sounds. Phonics helps with sounding out unfamiliar words (Kilpatrick, 2015).

Phonological (phonemic) Awareness* - the ability to identify and manipulate the sounds in our language (WETA Public Broadcasting, n.d.b). It involves recognizing and producing syllables, rhymes, onset-rimes, and whole words within sentences. Phonemic awareness is the most complex of these skills and includes isolating, blending, segmenting, adding, deleting and substituting the smallest units of sound in spoken words (phonemes) (Armbruster et al., 2010).

Predictive Reading Skills* - research-based word reading skills that have been shown to be predictive of a student's future word reading success.

Progress Monitoring* - The systematic process of regularly assessing student growth over time, usually between benchmark screenings. Progress monitoring encompasses the assessment tool(s) used to determine student progress and is often a quick administration of the same instrument to determine growth. Progress monitoring results represent a snapshot to predict how well students are responding to reading instruction.

Rapid Automatic Naming (RAN) - not currently a required screening indicator; however, it is a strong predictor of a pre-literate student's later reading ability. It is a valuable piece of screening data (Johnson, n.d.). RAN measures how quickly a child can name aloud objects, pictures, colors, or symbols indicating fluency in cognitive processing.

Reliability - a screening or assessment measure is considered reliable when consistency of results over time is demonstrated.

Sight Word - any previously learned words that are part of a person's sight vocabulary (the words a person can identify immediately and effortlessly without the need to sound out the word or use context clues). It does not matter if these words are phonetically regular or irregular, only that they are instantly familiar when encountered.

Skills - automatic actions that result in decoding and comprehension with speed, efficiency, and fluency and occur without awareness of the components (Afflerbach et al., 2008).

Standards - concise, written descriptions of what students are expected to know and be able to do at a specific stage of their education. Standards are used to guide public-school instruction, assessment, and curricula within a country, state, school, or academic field (Great Schools Partnership, 2014).

Strategies - intentional techniques used to self-monitor understanding.

Systematic Instruction - a plan of reading instruction (e.g., scope and sequence) that takes students through an explicit sequence of learning activities (International Literacy Association, n.d.)

Tier 1* - universal, comprehensive, high quality, evidence-based core instruction provided to all students.

Tier 2* - targeted evidence-based intervention to address specific skill deficits for students not responding to Tier 1, provided outside of the core instruction, often, but not always provided in small groups.

Tier 3* - intensive evidence-based intervention for students not responding to Tier 2, instruction and supports that are individualized and intensified based on individual student need.

Universal Screening Instrument* - a screening instrument administered to all students, usually at three benchmark periods (beginning, middle, and end of the year), designed to quickly identify students whose performance on the measure warrants further diagnostic investigation. Technically adequate (valid and reliable) screening instruments are designed to predict which students are likely to fail to reach grade level expectations given their current progress. As a predictive measure of general reading abilities, they do not directly result in a diagnosis of student needs.

Validity - a screening or assessment tool is considered valid when it has been demonstrated to measure what it claims to measure.

Vocabulary* - the knowledge of words and their meanings and the ability to use those words when speaking and writing (WETA Public Broadcasting, n.d.c). Vocabulary refers to the words we must know to communicate effectively. In general, it can be described as oral vocabulary or reading vocabulary. Oral vocabulary refers to words we use in speaking or recognize in listening. Reading vocabulary refers to words we recognize or use in print" (Armbruster et al., 2010, p. 29).

Appendices

Appendix A: Evidence-Based Practices – Quantitative and Qualitative Research and Checklist for Selective Qualitative Research

Quantitative Research. Many factors are considered when determining the quality of quantitative research. One simplified explanation examines the study design as well as other criteria for making study quality determinations. The What Works Clearinghouse uses four tiers of study design as one set of criteria (REL Midwest, 2019). Tier 1 studies are the best and are well-designed experimental studies. Tier 2 studies are next and consist of well-designed quasi-experimental studies. Tier 3 studies are well-designed correlational studies, and Tier 4 studies have well-defined logic models based on rigorous research.

Of course, these tiers of studies do not account for high-quality qualitative research studies. These studies make important contributions to what we know about young readers, particularly for Indigenous groups of students. It is worthwhile to consider qualitative research for this reason.

Qualitative Research. It is difficult to do qualitative research well. While there is a range of approaches to qualitative research, some criteria for assessing quality are now falling into place. A parallel track of "Tiers" could be created to rate the efficacy of qualitative research. For example, Hannes (2011) uses four categories to assess quality: assessing credibility, assessing transferability, assessing dependability, and assessing confirmability. To the extent that these criteria are addressed, a taxonomy of "Tiers" could also be created to examine qualitative early literacy studies for consideration.

Levitt et al. (2018) have extensively documented standards for how research should be reported, including qualitative methods of inquiry. Qualitative researchers are more likely to discuss the process of inquiry in different ways, and do not follow a set formula. There is also an emphasis on the transparency ethic, which describes how researchers are "up-front" about their backgrounds, biases and preconceived notions that may influence results. Qualitative researchers are also concerned about contextualization, meaning that settings where research was done are carefully described.

Multiple criteria for rating qualitative research can be derived from the reporting standards identified by Levitt et al. (2018). For example, a good qualitative research report would describe the research purposes and design, the participants or data used, how data were analyzed, and the methodological integrity. It also would include findings and discussion. A description of researcher background is critical. It would include the qualifications of the researcher, experiences with the particular group or data to be reviewed, and results of other work done by the researcher. Again, these categories of information can be used to put qualitative research in "Tiers."

Checklist For Quantitative Research About Indigenous Students[1]

Methodology	Examples of general characterization considerations	Present
Literature review	Applicability to Indigenous students	☐
	Depth and breadth of literature viewed	☐
Case studies	Qualifications of authors	☐
	Researcher bias	☐
	Level of effort (duration of the study in the field, etc.)	☐
	Use of triangulation and validation to establish reliability and validity	☐
	Risk of confounding	☐
	Explication of casual relationship	☐
Ethnographies	Qualifications of authors	☐
	Researcher bias	☐
	Level of effort	☐
	Links to previous work	☐
	Use of triangulation and validation to establish reliability and validity	☐
Narrative, thick descriptions	Qualification of authors	☐
	Researcher bias	☐
	Description of context	☐
	Applicability to Indigenous education	☐
Expert opinion or position papers	Qualification of authors	☐
	Researcher bias	☐
	Balanced approach	☐

[1] Checklist derived from Cooper and Koenka's (2012) discussion of integrative scholarship, from Hannes' (2011) critical appraisal of qualitative research, from Schorr's (2012) inclusionist perspective, and from Goldsmith, Bankhead, and Austoker's (2006) approach to synthesizing quantitative and qualitative studies and bringing them into one review, details the sorts of criteria to be used for rating study rigor. Adapted from methods used in a literature summary produced by RMC Research for limited distribution to the REL Central Native American Education Research Alliance authored by Dan Jesse, CHiXapkaid (Michael Pave), Judy Northup, Linda Fredericks, Stephany Brown, Susie Bachler, Clare Heidema, and Richard Holdgreve-Resendez, March 2013. Revised by the Western Educational Equity Assistance Center (WEEAC) at MSU Denver, July 2020.

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Appendix B: English Learners Content

What Works Clearinghouse Practice Guide (2014): Teaching Academic Content and Literacy to English Learners in Elementary and Middle School

The WWC Practice Guides are developed by panels of experts in the field and include practical strategies that are based in evidence and recommendations of the experts. This practice guide makes the following suggestions for English Learners in elementary and middle school:

- Teach a set of academic vocabulary words intensively across several days using a variety of instructional activities (Strong Evidence).
- Integrate oral and written English language instruction into content-area teaching (Strong Evidence).
- Provide regular, structured opportunities to develop written language skills (Minimal Evidence).
- Provide small-group instructional intervention to students struggling in areas of literacy and English language development (Moderate Evidence).

What Works Clearinghouse Practice Guide (2007): Effective Literacy and English Language Instruction for English Learners in the Elementary Grades

This practice guide makes the following suggestions for English Learners in the elementary grades:

- Screen for reading problems and monitor progress (Strong Evidence).
- Provide intensive small-group reading interventions (Strong Evidence).
- Provide extensive and varied vocabulary instruction (Strong Evidence).
- Develop academic English (Minimal Evidence).
- Schedule regular peer-assisted learning opportunities (Strong Evidence).

Appendix C: Evidence-Based Resources for Literacy

Cognitive and Language Processing Factors

The Alphabetic Principal: From Phonological Awareness to Reading Words (NCIL, 2018) - this article from the Lead for Literacy group explains that explicit phonics instruction (how the alphabetic principle works, step by step) and extensive practice enable most children to learn the alphabetic principle, and provides strategies for teaching this principle. This site also includes a resource repository of evidence-based practices to support improving literacy instruction.

The Comprehensive Emergent Literacy Model: Early Literacy in Context (SAGE Open, 2015) - this article strives to explain how emergent literacy can be viewed as an interactive process of skills and context rather than a linear series of individual components. The author expresses her findings that early literacy learning opportunities are more likely to happen when teachers have a solid knowledge base of emergent literacy and child development. (Note: In this article, the abbreviation EL is used to mean Emergent Literacy, not English Learner.)

WWC: Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (WWC, 2016) - this guide provides teachers, reading coaches, principals, and other educators with instructional recommendations that can be implemented in conjunction with existing standards or curricula. It does not recommend a particular curriculum. Teachers can use the guide when planning instruction to support the development of foundational reading skills among students in grades K–3 and in diverse contexts. (Note: This guide is a companion to the existing practice guide, Improving Reading Comprehension in Kindergarten Through 3rd Grade, and as a set, these guides offer recommendations for preparing students to be successful readers.)

WWC: Improving Reading Comprehension in Kindergarten Through 3rd Grade (WWC, 2010) - the goal of this practice guide is to offer educators specific evidence-based recommendations that address the challenge of teaching reading comprehension to students in kindergarten through 3rd grade.

Collaboration

COLLABORATION: Working Together to Serve Multilingual Learners (WIDA, 2020) - collaboration gives students the opportunity to work and collaborate together to learn and grow from each other. Collaborative learning develops higher-level thinking skills in students and boosts their confidence and self-esteem.

WIDA Research Brief: Collaborative Learning for English Language Learners (WIDA, 2014) - this research brief reports preliminary results from a study of teachers' successful experiences engaging ELLs in collaborative learning with peers.

Family Engagement

ABCs of Family Engagement (WIDA, 2016) - provides key considerations for building relationships with families and strengthening family engagement practices.

Guiding Principles of Language Development (WIDA, 2019) - ten Guiding Principles of Language Development and Learning exemplify WIDA's overarching and ever-present Can Do Philosophy.

The English Language Learner Can Do Booklet (WIDA, 2012) - the Can Do Descriptors are the centerpiece of this booklet, designed to support teachers by providing them with information on the language students are able to understand and produce in the classroom. What is unique about the Can Do Descriptors is that they apply to all five English language proficiency standards, which means they provide an opportunity to link language development across all academic content areas. The Descriptors are intended to be used in tandem with the Performance Definitions. This is because the quantity and quality of language expected at a particular level of language proficiency may not be fully indicated within the Can Do Descriptor for each language domain and proficiency level.

The WIDA Can Do Philosophy (WIDA, 2014) - the WIDA Can Do Philosophy reflects the foundational belief that everyone brings valuable contributions to everything they do. Students bring linguistic, cultural, and experiential assets not only to the classroom but to the larger community as well.

WIDA Focus on Family Engagement (WIDA, 2015) - family engagement in early education is particularly important for children in that it helps create consistency between the home and school environments. Children see benefits like improved cognitive development and academic performance, better social-emotional development, and improved health.

WIDA Focus on the Early Years: Assets-Based, Language-Focused Family Engagement for Dual Language Learners (WIDA, 2016) - this WIDA Focus Bulletin explores multiple ways to effectively engage families of DLLs in their children's linguistic and cultural development.

WIDA Focus on the Early Years: Supporting Early Literacy Development (WIDA, 2016) - this WIDA Focus Bulletin explores different ways for "growing" oral language while supporting early literacy development of DLLs.

Ecological and Psychological Factors

The Critical Role of Oral Language in Reading Instruction and Assessment (Lexia Learning, 2020) - this white paper examines the role of oral language in reading instruction and assessment, looking at factors such as children's experiences in the home and their SES as keys for early screening and instruction to build foundational skills.

General Resources for Identifying Sources of Best Practices, High Quality Materials, and More

Best Evidence Encyclopedia - a website developed and maintained by the Johns Hopkins University School of Education's Center for Data-Driven Reform in Education under funding from the Institute of Education Sciences, U.S. Department of Education. It serves as a resource to educators and researchers for free access to various scientific reviews and features topical areas including reading in elementary.

EdReports.org - an independent nonprofit with the goal of improving K–12 education by helping to connect teachers, administrators, and leaders to high-quality instructional resources including reports, materials, and more.

Evidence for ESSA - a website providing recent and reliable information on programs meeting ESSA evidence standards. It reports information in topical areas including reading.

The Center for Effective Reading Instruction - a website providing various resources of what teachers should know to provide effective instruction to ensure all children become proficient readers.

Using the WWC To Find ESSA Tiers of Evidence - evidence requirements under the Every Student Succeeds Act (ESSA) are designed to ensure that states, districts, and schools can identify programs, practices, products, and policies that work across various populations. This supplemental, short YouTube video explains the law's four tiers of evidence.

What Works Clearinghouse - part of the Institute for Education Sciences, U.S. Department of Education, serving as a central and trusted online source for scientific evidence of what works in education. It provides vetted resources by topical areas including literacy.

For Interventions

Tools Chart Resources (NCII at AIR) - this site displays six tools charts which include expert ratings on assessments and interventions, based on established criteria and not compared to each other or ranked. The charts are intended to assist educators in selecting academic and behavioral assessment tools and interventions that meet standards for technical rigor and address specific needs.

Beginning Reading Evidence Review Protocol (WWC, 2014) - this rigorous, research-based guide for reviewing evidence for the effectiveness of beginning reading interventions focused on increasing literacy skills in grades K–3. The protocol is guided by three research questions and is designed for researchers.

Evidence Review Protocol for Interventions for English Learners (WWC, 2019) - this rigorous, research-based guide for reviewing evidence related to interventions is designed to address achievement gaps for English Learners and/or content area achievement. The protocol is guided by three research questions and is designed for researchers.

Pre-K Literacy

Literacy Essentials (MAISA, 2018) - this site has guides from Michigan's Early Literacy Task Force (ELTF), which was charged with improving Michigan's early literacy capacity using research-based practices for professional development. The guides provide recommendations for one-on-one interactions with children as young as newborns to support early literacy outcomes.

Social and Emotional Learning (SEL)

Advancing Social and Emotional Learning (SEL) as a Lever for Equity and Excellence (CASEL, 2020) - the purpose of this Equity Work Group is to create a thriving community of learning that fosters awareness, knowledge, skills, and relationships necessary to implement SEL to create and sustain equitable educational ecosystems.

Specific to English Learners

Effective Literacy and English Language Instruction for English Learners in the Elementary Grades (WWC, 2007) - this What Works Clearinghouse guide for administrators, curriculum specialists, coaches, staff development specialists, and teachers identifies research-based strategies for effective literacy instruction for English language learners in the elementary grades. Five recommendations and checklists for carrying them out are provided.

Language and Culture (WIDA, 2011) - this Focus Bulletin has been reformatted and lightly edited to emphasize current WIDA resources and terminology. It explores linguistic and cultural diversity in school, and how teachers, staff, and parents can help multilingual learners feel welcome, confident, and prepared to succeed academically.

Teaching Academic Content and Literacy to English Leaners in Elementary and Middle School (WWC, 2014) - this What Works Clearinghouse practice guide provides research-based strategies for English learners during reading and content area instruction. The guide includes extensive examples of activities and is for teachers, administrators, and other educators who work with English learners in elementary and middle school.

WIDA Focus on Differentiation Part 1 (WIDA, 2012) - this WIDA Focus Bulletin provides a useful planning template and step-by-step explanations of how teachers (classroom/content-area, special education, literacy, ESL, bilingual) can differentiate their grade-level content and language instruction and assessment for the ELLs in their classes.

WIDA Focus on Differentiation Part 2 (WIDA, 2012) - this WIDA Focus Bulletin provides a useful planning template and step-by-step explanations of how teachers (classroom/content-area, special education, literacy, ESL, bilingual) can differentiate their grade-level content and language instruction and assessment for the ELLs in their classes.

WIDA Focus on SLIFE: Students with Limited or Interrupted Formal Education (WIDA, 2015) - "Students with Limited or Interrupted Formal Education" - (SLIFE) is an umbrella term used to describe a diverse subset of the English language learner population who share several unifying characteristics. SLIFE usually are new to the U.S. school system and have had interrupted or limited schooling opportunities in their native country. They have limited backgrounds in reading and writing in their native language(s) and are below grade level in most academic skills.

Specific to Native American Students

American Indian English Language Learners (WIDA, 2014) - this WIDA Focus Bulletin explores the integral connection between language and culture for American Indian English Language Learners.

Culturally Responsive Instruction for Native American Students (WestEd, 2020) - this is a professional learning series on culturally inclusive and responsive instruction that emphasizes experiential, active, and student-centered learning. It is not content-centered, but rather provides pedagogical principles to support teachers in creating (or adjusting) lessons and curricula informed by and integrating Native students' cultures.

Grades PK–2 Student-Centered Learning Activities (NIEA, 2020) - this site, developed by a partnership between IllumiNative and the National Indian Education Association (NIEA), provides approximately 20 activities for PK–2 students across content areas, some of which incorporate specific literacy-based strategies that are culturally relevant. Before engaging in activities, students read about them and process what they learned.

Specific to Online Learning

Teaching Reading Online: Webinar Series (UFLI, 2020) – This webinar series from the University of Florida provides an overview of best practices for teaching reading online, explains how to use the University of Florida Literacy Institute's teaching hub, and spotlights on primary (K–2) and intermediate (3–5) literacy instruction.

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