

ACADEMIC INTERVENTION

Introduction

The characteristics of evidence-based effective intervention described in this section will benefit all learners and is not limited simply to students who have been found to be at-risk for dyslexia. Effective core instruction for reading and spelling has been shown to benefit all students. Supplemental, or targeted, instruction is more effective when it is aligned to the classroom's scope and sequence.

“Program” is the term used to describe specific, often packaged, materials used to provide reading instruction. “Practice” is the term that refers to the way instruction is delivered, or to the instructional strategies used. The findings of studies designed to identify best programs have yielded inconclusive results, whereas examinations of best practices have led to highly consistent results when such studies have been rigorously designed and systematically analyzed and compared.

The needs of students found to be at-risk for dyslexia can be addressed using evidence-based practices within a framework of multi-tiered systems of support (MTSS).

Core Instruction within the Context of Multi-Tiered Systems of Support

As with other models of multi-tiered systems of support, educators ensure that students are provided sound reading instruction at the universal level using the guidance provided by the National Reading Panel (NRP 2000) and the National Early Literacy Panel (NELP 2008). Then, increasing support in the form of targeted intervention aligned with the core or universal reading program is provided to students found to be at-risk. Students who do not demonstrate the projected response to targeted intervention then receive intensive intervention.

As mentioned earlier, educators should apply the core strategies or practices identified at every level of reading instruction given multi-tiered systems of support model. The five core components of evidence-based reading instruction are the following:



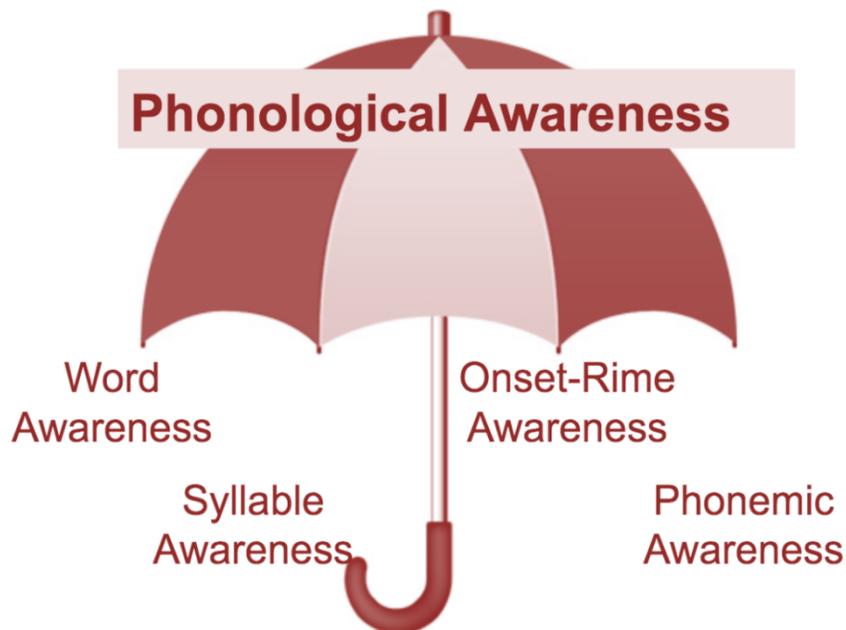
1. Phonemic Awareness
2. Systematic Phonics
3. Fluency
4. Vocabulary
5. Text Comprehension

All levels of intervention need to incorporate these five elements of reading. Phonemic awareness is a crucial skill for all students learning to read, and there is a greater emphasis on this skill at the kindergarten and first-grade levels. Systematic phonics instruction is a key component in early literacy. Decoding, reading fluency, and comprehension are highly correlated through third grade. After third grade, other factors in addition to decoding start to be statistically significant contributors to comprehension, including vocabulary, background knowledge, and knowledge of text structure.

Evidence-Based Core Reading Instructional Strategies

Phonological Awareness

Phonological awareness is the umbrella term that refers to the ability to attend to, discriminate, remember, and manipulate oral language units at the word, syllable, and phoneme (sound) level. The graphic below illustrates this.

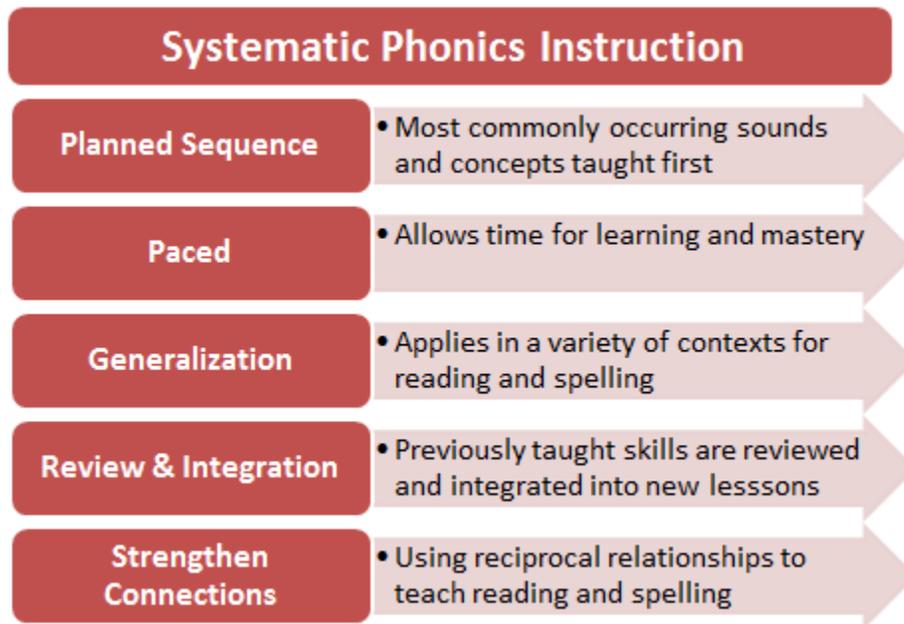


Phonemic Awareness

Phonemic Awareness is teaching how sounds (phonemes) are manipulated in language. Some sample phonemic awareness practices include the following:

Practice	Description	Example
Phoneme isolation	Recognizing individual sounds in words	Tell me the first sound in boy. (/b/)
Phoneme identity	Recognizing the common sound in different words	Tell me the sound that is the same in sit, sack, supper. (/s/)
Phoneme categorization	Recognizing the word with the odd sound in a sequence of three or four words	Which word does not belong? Tip, ten, pan (pan)
Phoneme blending	Requires listening to a sequence of separately spoken sounds and combining them to form a recognizable word	What word is /k/ /a/ /ch/ ?” (catch)
Phoneme segmentation	Requires breaking a word into its sounds by tapping out or counting the sounds, or by pronouncing and positioning a marker for each sound	How many phonemes are in thick? (3: /th/ /i/ /k/)
Phoneme deletion	Requires recognizing that a word remains when a specified phoneme is removed	What is stick without the /s/? (tick)

Systematic Phonics



Core reading instruction must include the evidenced-based practice of instruction in systematic phonics. The English language is primarily phonetic. Interestingly, 94-97% of words in the English language can be decoded using phonics or word analysis. Systematic phonics instruction is both synthetic and analytic. Synthetic phonics provides instruction in teaching letter sounds and teaching blending the sounds for reading whereas analytic phonics includes the analysis of letter-sound relationships in previously learned words and does not pronounce sounds in isolation.

Integration Phonemic Awareness and Systematic Phonics Instruction

Common phonics activities engage students in applying phonemic awareness and sound symbol correspondence to building and reading words. A skilled teacher can make instruction engaging when using systematic phonics. Children can become excited about learning more about the sound-symbol code. It is important to integrate phonemic awareness when teaching letter-sound correspondence. Students are asked to read, write and often demonstrate word meaning in typical phonics tasks.

Fluency: Accuracy + Rate + Prosody = Fluency

Core reading instruction will include the evidence-based strategy of fluency instruction. Fluent reading is, first and foremost, accurate. Accurate reading is necessary prior to become a faster reader. The practice of developing fluency includes the development of rate, or reading speed, and prosody, or expression while reading. Fluency instruction focuses on assisting students in developing their ability to use typical speech patterns and appropriate intonation while reading orally.

Strategies to Increase Fluent Reading

Repeated Reading

- * Readers Theater
- * Choral Reading
- * Echo Reading
- * Fluency Cards

Oral Reading with Feedback

The student reads aloud to teacher, who gives feedback about skills and strategies.

Partner or Peer Reading

- * Reading to peers
- * Reading to young students
- * Taking turns reading orally

Vocabulary

Core reading instruction will include the evidence-based practice of vocabulary instruction. Vocabulary, or knowledge of word meanings, plays a key role in reading comprehension. Research supports both explicit, systematic teaching of word meanings and indirect methods of instruction. Repeated exposure to vocabulary is the most effective means of accomplishing learning. The National Reading Panel Report (2000) outlines a variety of vocabulary teaching practices or strategies. Students acquire vocabulary knowledge best when a variety of engaging methods is used.

Strategies for Effective Vocabulary Instruction

Explicit Instruction

Students are provided definitions or other characteristics of words to be learned.

Implicit Instruction

Students use text context to develop word meaning.

Multimedia Methods

Graphic organizers, objects, or experiences are used to teach vocabulary

Capacity Methods

Reading automaticity is accomplished through practice

Association Methods

Instruction has prior knowledge connect to new vocabulary

Comprehension

Core reading instruction is most effective when text comprehension is taught by actively involving students in multiple comprehension strategy instruction and strategy use in context over time. Multiple comprehension instructional strategies

have been shown to improve students understanding of text. Cumulative instruction in comprehension strategies leads to students implementing these taught strategies. In order to develop habits in implementing reading comprehension strategies, students must use them actively. The strategies must be taught with ample opportunity for guided practice and then independent practice.

Evidenced-based Comprehension Practices

Comprehension monitoring

Cooperative learning

Graphic/semantic organizers

Teaching about text structure

Question answering

Summarization

Supplementary Instruction for Students At-risk

Supplemental instruction is provided **in addition to** the core instruction in the classroom. A student should not be removed from the core instruction in order to receive supplemental instruction.

The supplemental instruction provided for our students at-risk for dyslexia should be aligned with the scope and sequence being used in the classroom. Instructional materials used for supplemental instruction do not have to be from the same publisher. They can be adapted to coordinate with the scope and sequence of the classroom.

Students found to be at-risk for dyslexia need core reading instruction which includes phonemic awareness, systematic phonics, fluency, vocabulary, and text comprehension. Supplementary instruction, targeted intervention, needs to teach the structure of the English language within the framework of a multisensory structured language approach.

Multisensory Structured Language Approach

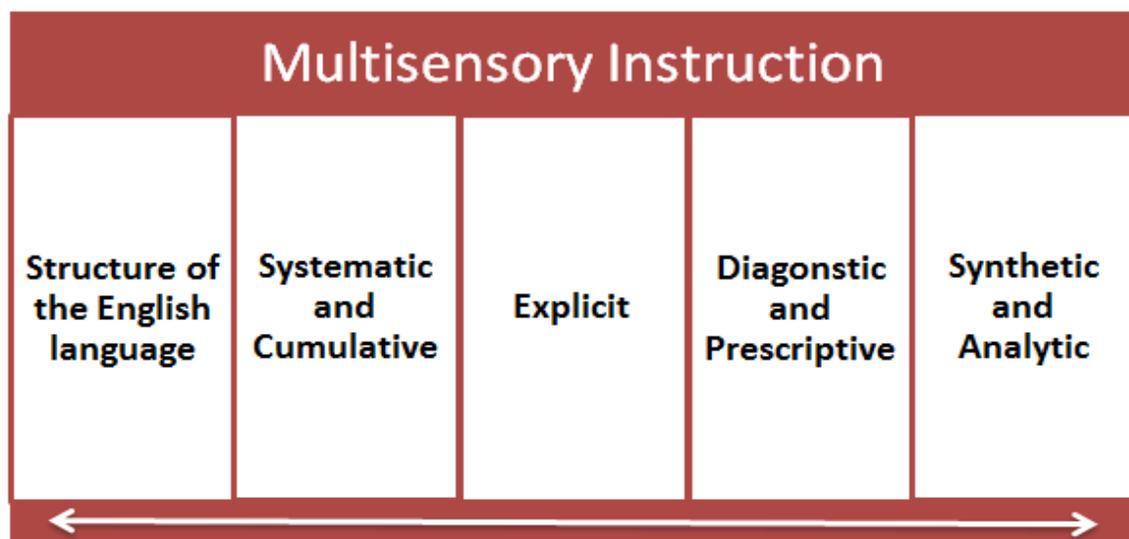
Why Use a Multisensory Structured Language Approach?

Multisensory Structured Language Instruction helps individuals at-risk for dyslexia or diagnosed with dyslexia because it targets and develops the parts of the brain that are not functioning efficiently for reading.

What is Multisensory Structured Language?

The components of Multisensory Structured Language include:

- Instruction in the Structure of the English Language
- Simultaneously Multisensory
- Systematic and cumulative
- Explicit instruction
- Diagnostic-prescriptive teaching approach
- Synthetic instruction
- Analytic instruction



Structure of the English Language

When teaching the structure of the English language, we need to include the following components:

- Phonology
- Sound-Symbol Association
- Syllable Instruction
- Morphology
- Syntax
- Semantics

Simultaneous Multisensory

Multisensory structured language teaching uses all avenues of brain learning (visual/auditory, kinesthetic-tactile) simultaneously in order to strengthen memory and learning. For example, to learn the sound symbol correspondence “d”= /d/ when shown a flash card of the letter d, the student says the letter name “d”, then the keyword “dog”, then the sound /d/ while tracing the letter “d” on a bumpy surface. In this example, the visual component occurs when the student sees the letter, auditory component occurs when the student says the letter name and sound, the kinesthetic component occurs when a student moves their hand to make the letter shape, and the tactile component when the students feels the bumpy surface.

Systematic and Cumulative

Systematic means that the organization of material follows the logical order of the language. The most common and predictable skills and concepts are taught first so that students acquire skills with the highest utility first. Cumulative means each step is based on concepts previously learned. To enhance students’ memory of the concepts they have been taught, previous instruction is reviewed systematically.

Explicit

The Multisensory Structured Language approach requires purposeful instruction of all concepts with continuous student-teacher interaction. Students are not left alone to deduce concepts. The teacher uses Socratic questioning to achieve an active interaction with the student. Multisensory structured language instruction requires the direct teaching of all concepts with continuous student-teacher interaction.

Diagnostic and Prescriptive

Diagnostic teaching is based on methodical, continuous assessment. When students make an error, the teacher mentally analyzes the cause of the error and designs instruction to help increase the students’ skill and improve their accuracy. In this way, the teacher ensures students master presented content to automaticity, which is critical to freeing students’ attention and cognitive resources for comprehension and expression.

Synthetic and Analytic

Multisensory Structured Language practices include both synthetic and analytic instruction. Synthetic instruction presents language in its pieces and then teaches how the pieces form a whole. Analytic instruction presents the whole and teaches how this can be broken down into pieces.

Reading and spelling have a reciprocal relationship. The use of both synthetic and analytic instruction strengthens neural connections in the brain. Practice in reading and spelling with the same skill build a stronger and faster neural connection to help students read and spell more fluently.

Choosing an Evidence-Based Intervention

Each school district has the discretion to choose evidence-based interventions.

“Evidence-based reading instruction means that a particular program or collection of instructional practices has a record of success. That is, there is reliable, trustworthy, and valid evidence to suggest that when the program is used with a particular group of children, the children can be expected to make adequate gains in reading achievement. Other terms that are sometimes used to convey the same idea are research-based instruction and scientifically based research.” (IRA 2002)

When teams are analyzing the current interventions being used or considering whether to use a different intervention, there are some questions they can ask themselves as shown in the table below. If the answer to any of the questions is “no,” then the team needs to consider a solution to the problem.

Examining an Intervention for MTSS	Yes	No
Is it evidence-based?		
Does it use systematic phonics?		
Is phonemic awareness a component for K-1?		
Is teacher training available in NH?		
Is there a practicum component?		
Is there a certification?		
Are materials available?		

Sample Evidence-based Interventions

Below you will find an analysis of five commonly used evidence-based interventions that can be used at the targeted level of intervention. Charted below are several reading and writing interventions. These are commonly used; however, this is not an exhaustive list. Districts can choose an evidenced-based intervention that fits best for their personnel and students.

Orton-Gillingham (Approach)	Yes	No
Is it evidence-based?	X	
Does it use systematic phonics?	X	
Is phonemic awareness a component for K-1?	X	
Is teacher training available?	X	
Is there a practicum component?	X	
Is there a certification?	X	
Are materials available?	X	

Wilson Reading System	Yes	No
Is it evidence-based?	X	
Does it use systematic phonics?	X	
Is phonemic awareness a component for K-1?	X	
Is teacher training available in NH?	X	
Is there a practicum component?	X	
Is there a certification?	X	
Are materials available?	X	

LETRS	Yes	No
Is it evidence-based?	X	
Does it use systematic phonics?	X	
Is phonemic awareness a component for K-1?	X	
Is teacher training available in NH?	X	
Is there a practicum component?		X
Is there a certification? (Yes for trainers)	X	
Are materials available? (Teachers integrate activities.)		X

Lindamood-Bell (LiPS, Seeing Stars)	Yes	No
Is it evidence-based?	X	
Does it use systematic phonics?	X	
Is phonemic awareness a component for K-1?	X	
Is teacher training available? (Available in MA)	X	
Is there a practicum component? (At Centers)	X	
Is there a certification?		X
Are materials available?	X	

Project Read (Phonics, Linguistics)	Yes	No
Is it evidence-based?	X	
Does it use systematic phonics?	X	
Is phonemic awareness a component for K-1?	X	
Is teacher training available in NH? (By webinar or DVD)	X	
Is there a practicum component?		X
Is there a certification?		X
Are materials available?	X	

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